Lumleian Lectures ON INFLAMMATION.

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LECTURE III.

(Concluded from page 636.)

THERE is one other question which I am desirous to bring before you in these lectures, and it will necessarily be the last. It is that of the influence of the cerebro-spinal nervous system on the inflammatory process. I have already placed before you very shortly the evidence which exists, that in the well-known case of inflammation of the cornea after section of the fifth nerve, the origin of the process is not neuro-paralytic. On similar grounds it has been established that the broncho-pneumonia which inevitably follows section of both pneumogastric nerves is also a traumatic inflammation, due to the entrance of portions of food and secretions from the alimentary canal into the respiratory passages, and is therefore only an indirect consequence of the severance of the nerves.[1]

When these neuro-paralytic phenomena were first known they served, if not to suggest, at least to strengthen the belief that the action of nerves had a great deal to do with inflammation, either by virtue of a trophic influence exercised through them on the tissue, by the cerebro-spinal centres, or by vaso-motor reflex action. Thus the attempt has been made to show, but with signal failure, that pleurisy could be induced by extirpation of the third cervical and first dorsal ganglia of the sympathetic chain in the neck; that meningitis, in like manner, would result from destruction of the superior cervical ganglion.[2] With somewhat better success Dr. Brown-Séquard[3] made certain experiments for the purpose of ascertaining why, in the human subject, severe burns are so frequently followed by inflammatory lesions of the intestinal mucous membrane. What he found was that such results could be produced in guinea-pigs by similar causes; and, further, that it was essential that the nervous connexion between the injured limb and the spinal cord should be intact. He accordingly was led to regard the visceral lesions which occur in burns as examples of "reflex inflammation." We may accept the fact, but scarcely its explanation.

But the point to which I wish more especially to direct your attention is *not* that of the relation of the nervous system to the causation of certain inflammations, but the part which it may be supposed to play in its initial phenomena. The phenomena I mean are those of determination of blood, or affluxus, or, as Virchow calls it, surging of blood[4] towards an irritated part, of which we have the most familiar example in the congestion of the conjunctiva which promptly follows the introduction of a grain of dust between the eyelid and bulb. In many inflammations this preliminary rush of blood along the dilated vessels is absent, witness the cases dwelt on in my first lecture, in which the inflammatory state comes into existence *d'emblée* in consequence of exposure to heat or cold; or the case of mycotic inflammation of the cornea, in which the episcleral vessels do not become affected until the infective material has slowly found its way from the ulcerated surface to the limbus, or in the case of erysipelas, when redness and swelling invade the skin in company, without any antecedent active congestion; whence we conclude that although determination of blood is a frequent precursor of inflammation, it is not a part of it, and we are confirmed in that opinion by the observation that the "inflammatory blush," as Hunter called it, presents itself as the sole response of the vessels to local irritation; of which fact no better illustration can be given than the famous instance in which he observed it day after day in a patient whose toe he had occasion to cauterise regularly. "After each application," he relates,[5] the surrounding parts put on a blush, and all the veins on the top of the foot, as well as up the leg, immediately began to swell, and became large and full." No experiment can be better adapted to show the complete distinction between determination of blood and inflammatory hyperæmia than that described by Dr. Williams in the Gulstonian lectures, to which I have already referred. Hunter had shown by his experiment that it is possible for the inflammatory blush to subside, leaving no trace—for the injured part to be flooded with blood, and then to return to its original condition. But Hunter's attention was entirely fixed on the blood-vessels, to the action of which he attributed the whole process. For the purpose of separating Hunter's "incipient enlargement of the vessels upon the first excitement of inflammation"[6] from the definite changes which followed it, Dr. Williams judiciously adopted the method of graduated irritation of the web of the frog's foot, which was at that time the only field of experimental observation. He found that a weak solution of capsicum applied to the web causes dilatation with acceleration of the movement of blood (hyperæmia with increase of motion) in arteries and capillaries; but if the solution were strengthened or the application several times repeated, the quickening soon gave way to slowing and commencing stagnation.[7] The effect of the weak excitation was transitory, and the observation could could be repeated any number of times on the same web. The stronger solution produced permanent damage of the tissue, resulting in inflammatory congestion, exudation, and stasis. In the experiment on the mammalian mesentery the same effect may be produced in a similar way. The substitution of 1½ per cent. solution of salt for the ordinary ¾ per cent. solution which is used as an irrigating fluid, at once has the effect, as Dr. Thoma[8] has shown, of hurrying on the blood-stream; and if this is done at a time when the mesentery has already undergone inflammatory slowing, and the colourless corpuscles are hugging the walls of the veins, these corpuscles at once resume their place in the axial current, so that so far from the initial affluxus being itself an inflammatory phenomenon, we can, by reducing it, arrest an inflammatory process when even in progress.

We have now, I think, clearly before us the phenomena of the inflammatory afflux. It so resembles a reflex action in the way in which the vessels of an irritated part respond to the stimulus, that the view which most naturally suggests itself is that of its reflex nature. To come to a conclusion as to whether it is so or not, let us first look at the question from the purely physiological side. There are vascular reactions which resemble the inflammatory, very strikingly in their character, about which we know that they are reflex. To what extent does that similarity indicate identity of mechanism? One of the best known of these instances is that of the submaxillary gland.

In 1858 it was discovered by Claude Bernard[9] that the influence of the lingual nerve on the secretion of that gland, which Ludwig had made known by his experiments in 1851, was really due to the chorda tympani, and that this remarkable nerve had two distinct afferent functions: that on the one hand it presided over the secretion of the gland; on the other over the circulation of blood through its vessels in such a way that when the chorda tympani is excited electrically the gland reddens, vessels before invisible, even with a lens, become easily distinguishable, the veins fill with blood (which, instead of being crimson, is scarlet), pulsate like arteries, and, if cut, spirt also like arteries.

Now, it is quite clear what John Hunter would have thought of this experimental fact, if he had seen it. He would have at once recognised its analogy to the inflammatory blush, and would have explained it by reference to what he called "a common principle in the animal machine"—namely, that "vessels become large in proportion to the necessity of supply." In the sixty years that had passed since his death that idea of Hunter had developed

[1] A good summary of what is known on this subject will be found in Professor S. Mayer's Specielle Nervenphysiologie, published in the second volume of the Handbuch der Physiol., Leipzig, 1879.
[2] See on this subject Vulpian, Leçons sur l'Appareil Vaso-moteur, vol. ii., 1875, pp. 570, 571, as to the source of fallacy in these experiments.
[3] Leçons sur les Nerfs Vaso-moteurs, Paris, 1872, p. 44.
[4] Blutwallung, Handbuch der Speciellen Pathologie, vol. i., pp. 141-156.
[5] Treatise on the Blood and on Inflammation, 1794, p. 188.
[6] Treatise on the Blood, &c., p. 279.
[7] See Principles of Medicine. Third Edition, pp. 241 and 263.
[8] Ueber Entzündliche Störung des Capillarkreislaufes bei Warmblütern. Virchow's Arch., vol. lxxiv., Sup. Abd., p. 27.
[9] Leçon sur la Physiologie et la Pathologie du Système Nerveux, Paris, 1858, vol. ii., p. 144.

into the doctrine of what was called vital attraction; the doctrine that the distribution of the blood to different parts of the body or to different organs is determined by the attraction for the blood which the tissues were supposed to exercise. This doctrine was present to all physiologists at that time, and led Bernard to make various experiments for the purpose of determining the physiological relation between the two effects observed—namely, increased secretion and the blush which accompanied it. From the fact that these effects were not really simultaneous, the vascular effect being seen earlier than the increased secretion, he inferred that they were independent; but this was not proved until Heidenhain,[10] profiting by the remarkable property of the alkaloid atropin in annulling the function of secretory nerves, showed that in an atropinised animal (that is, an animal in which atropin enough had been injected into the circulation to paralyse the secretory mechanisms) vascular congestion of the submaxillary gland could be excited either reflexly or directly, without stimulating it to increased secretion. Here, then, was a case which might be strictly compared with the inflammatory blush; for it was unmixed with any other physiological effect. To this first example of determination of blood to a part directly dependent upon central influence many others might now be added from the records of experimental physiology. I will mention only one of them, and that chiefly on the ground that it seemed to offer a rather plausible explanation of the phenomenon which now engages our attention. I refer to the experiments of Professor Christian Lovén[11] of Stockholm (with whose charming personal qualities we had, many of us, the opportunity of becoming acquainted last August). What Lovén discovered was, that under certain easily realised conditions, an active congestion of the rabbit's ear, as intense as the paralytic hyperæmia of Bernard and Brown-Séquard, observed after section of the vascular nerves of that organ, could be determined reflexly—that is, by stimulation of its sensory nerves; and that in other parts of the surface of the body similarly localised hyperæmia could be produced by localised stimulation.

I have referred to these instances of reflex dilatation of the bloodvessels in the most cursory way, because, in reality, their bearing on the question immediately before us is only indirect. The really important fact that we learn from them is that some mechanism exists in the bloodvessels of such a kind as to suggest active dilatation; for in all of them we see that a few seconds after a stimulus, of which the influence is received, whether reflexly or directly, through a cranial or spinal nerve, the vessels dilate. Now, at a period not very remote from the present, such an action appeared to a great many physiologists impossible—it seemed impossible, I mean, that a bloodvessel could be acted upon by stimulating its nerves otherwise than to produce contraction of its calibre, for the simple and obvious reason that in arteries neither the ring-fibres nor the longitudinal fibres could, by their contraction, produce such an effect, and because no other mode of action of a muscular structure excepting contraction could be recognised. The difficulty was regarded as so serious that the experimental proof given long ago by Schiff,[12] that there were such things as dilating nerves was accepted with the utmost unwillingness. Now we are convinced of the fact that the nerves of muscles of the external parts of our bodies generally dilate under the same conditions that the vessels of our viscera contract, and we recognise in this antagonism[13] between outside and inside a factor of great importance in the adaptation of the circulation of blood to the needs of the organism. But, as I have already hinted, for reasons which are easily stated, we must not allow ourselves to be misled by the apparent analogy of such effects as—e.g., that of the reflex congestion of the ear of the rabbit, produced by stimulation of its sensory nerves, into supposing that they have the same meaning as inflammatory congestion.

One reason is that of time. I have more than once spoken of the inflammatory blush as transitory. The meaning of such a word as transitory is relative. As compared with inflammatory congestion it is transitory, but compared with a reflex response such as occurs in the rabbit's ear or in the submaxillary gland it is lasting. The one is a question of minutes, the other of seconds. But the really conclusive reason why we are so absolutely certain that the Hunterian effect is not dependent on, though it is influenced by, the brain or spinal cord, is that it occurs in all perfection in paralysed parts. It is a very long time since Mr. Simon[14] observed in a patient whose eye was anæsthetic in consequence of disease affecting the fifth nerve, that when a grain of irritant substance was introduced underneath the upper eyelid, the conjunctiva became at once hyperæmic, although the patient felt absolutely nothing. This observation of Mr. Simon's was, perhaps, the earliest of the kind. However that may be, the truth of its teaching has been abundantly confirmed since. In the frog it is a matter of no great difficulty to ligature the root of the tongue in such a way as to exclude the bloodvessels. If this is done the circulation, of course, goes on naturally, and you may observe it on the smooth surface, under the microscope, as Waller did. If, while you are doing so, the surface is touched with a hot wire, it responds with a blush, just as the normal tongue does.

Side by side with these facts may be placed those which show that paralysed arteries respond to stimuli which act on them through the blood which circulates through them. The organ best adapted for showing this is the kidney. Half a dozen years ago Dr. Mosso[15] discovered that when artificial circulation is maintained through an excised kidney, under constant conditions as regards the pressure and temperature of the blood, the rate of flow through the organ undergoes variations which manifest themselves in changes of volume, and are due to the independent action of its arteries. Starting from these facts, Dr. Roy, of the Brown Institution,[16] has carried our knowledge of kidney innervation much further. He has investigated with the utmost minuteness the mode in which the arteries of the living kidney respond to a variety of conditions affecting them, through the blood with which they are supplied; and has proved, among other important facts, that the effect of certain diuretic remedies, which is due to the direct dilating influence on the renal arteries, is as well-marked after all the renal nerves have been divided as in the normal kidney. It is clear, therefore, that the arteries possess physiological endowments of a remarkable kind, independently of the nervous system. The next question is, How do they act? And to get at this we must briefly consider what the normal state of the arteries is; and inasmuch as our object is to eliminate the influence of the central nervous system, we must confine our inquiries to arteries from which the channels of cerebro-spinal influence have been cut off. When, by the nearly simultaneous discoveries of Bernard, Brown-Séquard, and Augustus Waller, the fact first became known that the arteries of organs of which the vaso-motor nerves were divided became enlarged, it was supposed that the state of paralysis was permanent. In short, as Brown-Séquard said in 1851, motor nerve is to muscle what vaso-motor nerve is to artery. Not many years later Schiff discovered, what everyone is now familiar with, that the paralysed artery recovers, and sometimes over-recovers its normal state of contraction, or, as we call it, its *tonus*. Tonus, therefore (by which I mean simply that the artery when subjected to the internal pressure to which it is accustomed is of its natural size), is one of the independent endowments of arteries. Another endowment is that of rhythmical contraction. Everyone has watched the rhythmical contraction of the arteries of the rabbit's ear. A few have perhaps seen the corresponding phenomenon, first observed by Mr. Wharton Jones in 1852,[17] the slow

[10] Ueber die Wirkung einiger Gifte auf die Nerven der glandula submaxillaris, Pflüger's Archiv, vol. v., p. 309.

[11] Ueber die Erweiterung von Arterien in Folge einer Nerven erregung, Ludwig's Arbeiten, 1866, pp. 1 29.

[12] Untersuch. z. Physiol. des Nerven Systems, p. 140, 1855.

[13] The first step towards the discovery of this antagonism was made by Heidenhain in 1870 (Ueber bisher unbeachtete Einwirkungen des Nerven Systemes, &c., Pflüger's Arch., vol. iii. p. 504) who found that increased action of the vaso-motor centre, however produced, led to increased vigour of the circulation and to increased temperature of superficial parts, notwithstanding the arterial constriction which until then had been regarded as the sole effect of such action. This observation had results comparable in importance to the first discovery of the vaso-motor nervous system, for, by suggesting that the regulatory influence of the brain and spinal cord on the bloodvessels was more complicated and more perfect than had before been imagined, it led to those later investigations too numerous to mention (Goltz, Gaskell, Heidenhain, Vulpian, Stricker, &c.) by which it has been learnt that vascular nerves differ in function not only according to the vessels to which they are distributed, but according to the physiological states of those vessels. Vast as is the work which has been accomplished in this line of investigation since 1870, it is but the introduction to what has still to be done.

[14] Lectures on General Pathology, p. 76, 1850.

[15] Von einigen neuen Eigenschaften der Gefässwand, Ludwig's Arbeiten, p. 156, 1874.

[16] Transactions of the Cambridge Philosophical Society, July, 1881.

[17] Discovery that the veins of the bat's wing are endowed with rhythmical contractility, Phil. Trans., 1852.

pulsation of the veins in the wing of the bat. At that time, vaso-motor nerves were not known. When they were discovered the influence of section was tried, and it was thought that these pulsations ceased. It is, indeed, only by experiments made during last year[18] that we know that these rhythmical movements are absolutely independent; for if the circulation is maintained artificially, the rhythmical motions continue for many hours after the death of the animal.

The evidence we thus derive from the manifestations in paralysed vessels of these two physiological endowments—namely, tonus and rhythmical action, that such vessels are in a functionally active state, naturally leads us back to the notion entertained by some of the older physiologists that the relation of the arteries to the central nervous system is similar to that of the heart. Of this similarity there can be no question. Of the bloodvessels it can be stated as truly as of the heart that their tonus is capable of being influenced by the cerebro-spinal nervous system in opposite directions according to the channels through which the influence is conducted; and, secondly, that they perform their functions in an orderly and natural manner after complete severance of the nervous system. For the same reasons, therefore, and in the same sense that we familiarly regard the action of the heart as automatic, notwithstanding that its motions are at every movement influenced and regulated by the central nervous system, we are justified in saying that the bloodvessels also act automatically and *proprio motu*. If we had to do with a single artery we might reason from one to the other, and venture on the analogy so far as to anticipate that whenever the key shall be discovered to the wonderful controlling influence exercised by the central nervous system on the heart, through the vagus, the same key will be found to serve for the solution of the equally difficult problem of the influence of these centres on the bloodvessels. But if we revert to the phenomenon on which we are now endeavouring to throw light, that of the inflammatory *afflux sanguinis*, we are at once reminded that as regards the vessels there is something else to be considered of which the physiology of the heart affords us no counterpart. When one puts a little bit of nitrate of silver on the nerveless tongue of a frog, or when a bit of dust is introduced under a feelingless eyelid, the effect starts from the irritant and rapidly spreads over the surface from vessel to vessel with considerable rapidity. How do we account for this coördinated action when the controlling influence of the nervous system is cut off? You know the answer that Lister made to this question in 1858. He met it by the hypothesis of a peripheral nervous system, or, as he called it, "a local coördinating apparatus, capable of being independently influenced by irritation," though normally "in subordination to the nervous system." These notions of Lister's, neglected and forgotten for fifteen years, have now become familiar. For by elaborate researches made chiefly during the years 1874-78, of which Goltz was the initiator, the independent action of the arteries of the external parts of the body has been established, and it has since become the habit of physiologists to talk of "peripheral local centres" for the vessels as if such things really existed. I need not say that there is no more anatomical evidence now that such things exist, than there was when Lister first called them into being in order to vest in them the local management of the vascular system. The question whether such machinery is necessary or not is one which we need not at present determine; nor does it in the slightest degree affect the pathological application of the firmly established and universally accepted conclusion that, centres or no centres, the peripheral arteries are able to act in concert with each other, even when they are deprived of the regulatory influence of the brain and spinal cord. And thus we find ourselves once more coming back to the notions which at one time were thought obsolete, of the great father and founder of physiological pathology, John Hunter, accounting for the inflammatory blush, which he was the first to describe, by attributing it, as he did, to the "action of the vessels."

[18] Luchsinger, von den Venenherzen in der Flughaut der Fledermäuse, Pflüger's Arch., vol. xxvi., p. 445.

IN Rochester on the 23rd inst. Hospital Sunday collections were made in all the churches and chapels of the town. The Mayor and members of the corporation proceeded to the cathedral in "state."

Clinical Lecture

ON THE QUESTION,

WHAT IS THAT CONDITION WHICH HAS BEEN CALLED URETHRAL FEVER?

Delivered at St. Mary's Hospital,

BY ARTHUR TREHERN NORTON, F.R.C.S.,

SURGEON AND LECTURER ON SURGERY TO THE HOSPITAL.

GENTLEMEN,—It is not at all uncommon to have an elevation of temperature after passing a catheter, even though the operation may have been performed without difficulty and without any material injury to the part. Again and again have I known catheterism to be followed by a rigor and elevation of temperature to over 103° by the following morning. I have been inclined to look upon this result of catheterism as unimportant, and have usually ordered an effervescing saline mixture, with confident expectation that the abnormal condition would disappear within twenty-four hours. The cause of this febrile excitement has never, to my knowledge, been explained, though the condition has been universally recognised, but I suppose we must look upon it as an *exciting* injury to the nervous system. We have a corresponding depression of temperature when there is a severe or *depressing* injury to the nervous system, so-called shock, under which tissue change is almost brought to a standstill. It is not therefore unreasonable that an injury of a severity insufficient to paralyse nerve action should, on the contrary, irritate and excite it, and so, by inducing increased tissue change, bring about the fever which we have now under consideration. A fever so induced would be transient in a subject otherwise healthy; but it would not be so in an unhealthy person with any part or organ already predisposed to inflammation; and more especially might unfavourable signs be expected to present themselves in that part or organ more closely allied to the injured part, such as the kidneys, in their relation to the bladder or urethra.

I will now refer you to the clinical reports of two cases recently under my care, in one of which the urethral fever was followed by paralysis of both cerebro-spinal and sympathetic nerves, and in the other by arterial fluxion of the kidneys, with albuminuria, and, I may presume, of cerebro-spinal nerve affection also, as evidenced by the attack of neuralgia, followed by herpes on the face and shoulders.

The first case was that of a man who was suffering from oxaluria, with symptoms sufficiently resembling stone to necessitate an examination of the bladder for the purpose of correct diagnosis. I sounded the bladder on June 9th, and he was attacked by rigors in the night, but the temperature did not rise above 100°. Not satisfied with my first examination, I sounded again on the 21st, and concluded that there was no stone in the bladder. He now suffered extreme rigors from ten o'clock in the evening till two in the morning, though the temperature rose only to 101·8°. On the 22nd and 23rd rigors continued for several hours, with a temperature of 101·6°. On the 24th he had lost a great deal of power over the lower limbs and had difficulty in speaking; the tongue deviated to the *right* side when protruded; ptosis on left side; only partial sensation in the legs and feet, more marked in the *right*, which he was unable to lift from off the bed; double vision; marked hypervascularity of the left forehead, left eyeball, and left side of the face and neck. On the 26th there was a rigor, and the mouth was drawn to the *right* side; notwithstanding that the tongue protruded to the *right*, the other signs were not altered. On the 29th there were signs of improvement; and on the 30th all paralysis disappeared, with the exception of weakness of the lower extremities. On July 13th there was a sudden rise of temperature with considerable effusion into the left tunica vaginalis, which, however, became gradually absorbed, and had entirely disappeared by the 21st. On the 30th he was dismissed. Dr. Handfield Jones, who has written largely upon reflex paralysis, saw the case with me, and considered it to be an example of this disease.

The second case was that of a man who suffered from stricture. He had contracted gonorrhœa twelve years previously, which was followed by urethral discharge at varying intervals. About a year ago he had again contracted the disease, and since that time the stream had been gradually diminishing. On May 2nd a No. 3 silver catheter was introduced into the bladder, and immediately afterwards a No. 4, though with more difficulty. On the 3rd, at 11 P.M., the patient had a somewhat severe rigor, and the temperature rose to 102·6°. On the 4th, at 5.30 A.M., there was another rigor, with a temperature of 105°. Through the day the temperature chart ran as follows: 9 A.M., 105°; 10, 105°; 11, 103·2°; noon, 105°; 1 P.M., 103°; 2, 102·4°; 3, 102·6°; 4, 102·8°. As the temperature, instead of decreasing, as had been the case in the first four hours, was now gradually rising, he was ordered a tepid bath, after which, at 5 P.M., the temperature was 100·2°, at 6 P.M. 100°, and at 7 P.M. 99·4°. On the 5th the hands twitched convulsively. He was sick several times during the night, and continually hiccoughing. He had passed but six ounces of urine in the twenty-four hours. The urine was acid, thick, and almost solid with albumen on boiling. On the 6th sickness and hiccough prevailed, and the right side of the nose and right eye were swollen. On the 7th a herpetic eruption broke out over the face and neck: a patch on the forehead, both sides of the nose, right cheek, and right lower eyelid; also a patch on the right front and one on the right back of the neck, and a small patch about the size of a half-penny over the inner extremity of the right clavicle. On the 10th the eruption had become encrusted with scabs. The patient's appetite recovered. The urine contained but a trace of albumen; this constituent did not entirely disappear from the urine until the first week in June. The severity of the symptoms lasted about six days.

In the first case there was general disturbance of the function of the whole nervous system. The tongue and some of the muscles of the face being in part paralysed, and the lower extremities likewise, both motion and sensation were interfered with, markedly so on the right side. The sympathetic nerve of the left side of the head and neck was affected by paralysis, and so also the left third nerve and partly the left seventh, the mouth being drawn to the right. The tongue was protruded to the right, showing its right or contrary side to what might be expected was paralysed; but this may be accounted for as an objective sign that the paralysis was general and irregular, though showing itself more in connexion with the left side of the brain than with the right. The patient recovered from all paralysis in nine days, and in more than three weeks after the operation, and exactly a fortnight after the disappearance of the paralytic symptoms, he was attacked by a subacute orchitis, or, more properly speaking, an arterial fluxion of that organ, with effusion, which became absorbed in about a week, the temperature having risen for a few hours only to 102°, and then dropped to 100° on the evening in which the testicle commenced to swell. This arterial fluxion of the testicle, I consider, must be looked upon as a second light attack of reflex paralysis of the sympathetic nerve, exactly the same as the hyperæmic condition of the left side of the head and neck, which occurred on the third day after the insertion of the sound into the bladder, and also precisely the same condition as that which I have called arterial fluxion of the kidney, which was accompanied by albuminuria in the second patient exemplifying this subject.

It may be noticed that the temperature was never very high in the first case, never much above 101°, though in the second case it reached 105°. The temperature must be considered an important datum in prognosis. The patient whose temperature reached only to 101° never gave me any cause for anxiety, notwithstanding the very extensive paresis. There was no anxious look about him; there were no severe constitutional symptoms, nor did he refuse food. But in the patient whose temperature reached 105° recovery was despaired of for more than two days. Imperceptible pulse, subsultus, continued sickness, and hiccough are unmistakable signs of an approaching end. In a case not altogether dissimilar from these, a man on whom I performed perineal section for stricture of the urethra, with urinary fistulæ and sinuses, the temperature reached 106° on the morning following the operation. Complete unconsciousness soon followed, and he died within twenty-four hours of the operation. The post-mortem examination revealed only congestion of all the internal organs and a fluid condition of the blood. There was unfortunately no opportunity of examining the water for albumen, for what urine was secreted, if any, passed through the perineal wound into the bed. In this case the temperature was remarkably high within a few hours of the operation, and never lowered, and I am inclined to think that had time given us the opportunity of testing we should have found the kidney here affected, as in the second case described.

The next important point is the herpetic eruption in the second case. Herpes febrilis, as Mr. Morris says in his excellent little manual on skin diseases, may be described as a neurotic disease, and though it commonly occurs as a symptom of catarrh or of pneumonia may be also due to any condition producing a rigor, such as the passing of a catheter. From his account, and from all other expressed opinions on the disease, we gather that herpes is an eruption in connexion with some nerve affection, and our continual experience teaches us that it is almost invariably in the track of one or more particular nerves and their ramifications, so that here again we have evidence in the second case of an affection of a portion of the cerebro-spinal system, the eruption being limited entirely to the right side of the head and neck.

Erichsen, in his last edition of Surgery, says "that the real nature of this affection (urethral fever) is, at least in the majority of cases, a disturbance of the circulation of the kidney, or some interference with its function due to reflex irritation from the passage of the instrument." The records of the cases here reported suggest that the reflex impression is more general than on the kidneys, the whole nervous system being more or less affected, though, perhaps, in the majority of cases the kidneys are the only organs which exhibit marked signs of the injury received. There are very numerous instances on record—indeed, many are of daily occurrence—in which a local irritation exhibits an injurious effect on distant organs through the influence of nerve communication, such as convulsions during dentition, and, as a rule, when the source of irritation is overcome, the secondarily affected organ recovers itself. But such is not always the case; for how often do we find the convulsions of dentition leave behind some physical change which persists during life, or perhaps some inflammatory change which runs its own characteristic course. So in like manner, when the irritant is in the urethra or bladder, we have a variety of results depending very much upon the extent and duration of the irritation, but also upon the diathesis of the patient. As a result of the passing of a catheter, we have in one case high temperature, for a few hours only, or perhaps the development of a crop of herpes with albuminuria, lasting for a fortnight or three weeks; in another case paresis or paralysis of one or more sets of nerves, or even of the whole nervous system, or perhaps complete unconsciousness, with high temperature, 106°, and death will take place in a few hours. Now, as I have said before, I can conceive that just as dentition brings about convulsions and physical change in the brain and its membranes, so the passing of a catheter or other irritation of the bladder may bring about the reflex hyperæmia of the kidney with albuminuria and subsequently physical change which may ultimately result in interstitial nephritis, and in so-called surgical kidney, even running on to suppuration and abscess of the kidney, a condition bearing no resemblance whatever to pyæmia and its secondary abscesses as now understood and explained. About the year 1868 I noticed that secondary abscess occurred in parts whose only communication with the seat of disease was a sympathetic plexus. The disease was plainly not pyæmia or septicæmia. This led me to believe and to write my views that many so-called cases of pyæmia were the immediate effect of paralysis of the vaso-motor system. At the present day we have a much clearer understanding upon the subject of septicæmia, but I think that in future it would have to be admitted that secondary suppurations may not only occur from septicæmia and from direct lymphatic absorption, but also from at least a third condition—namely, reflex vaso-motor paralysis.

From what has been said during the lecture may be gathered the answer to the question, "What is that affection which has been called urethral fever?" It is a reflex paralysis; or, in other words, it is an exciting impression upon or injury to a set of peripheral nerves, which by reflexion through a centre may result in paralysis of the whole or a part of the united cerebro-spinal and sympathetic nervous systems, either transient in character, or ultimately, through the vaso-motor system, bringing about structural change or suppuration in organs or other tissues.

ON THE

TREATMENT OF CHRONIC DYSENTERY BY VOLUMINOUS ENEMATA OF NITRATE OF SILVER.

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(*Concluded from page 641.*)

I WILL now relate all the cases I have treated by this method.

CASE 1.—A. C——, aged twenty-seven, a sailor, was admitted into the London Hospital on September 11th, 1878. Ten years before when on shipboard at Calcutta he had dysentery and his bowels were never regular from that time. In May, 1878, whilst in China, he had pneumonia, followed by a second attack of dysentery. This left a condition of chronic dysentery with occasional acute outbursts; the last one occurred a month before admission, when at New York. On admission he was wasted and anæmic, had a listless look, and he complained of weakness, loss of spirits, a feeling of fulness after food, and of diarrhœa, the bowels acting three or four times a day. He was treated with small doses of opium and rest in bed. He passed on Sept. 14th two motions; 15th, four; 16th, three; 17th, four; 18th, three; 19th, three; 20th, three. On the 21st an enema of one drachm of nitrate of silver to three pints of tepid water was given. The injection returned after a short interval. On Sept. 22nd the patient passed two motions, firmer and not so large; 23rd, two; 24th, one; 25th, one; 26th, one; 27th, two; 28th, one; 29th, one; 30th, one; Oct. 1st, one; 2nd, one; 3rd, one; 4th, one; 5th, one; 6th, two; 7th, two; 8th, none; 9th, one. From this time until his discharge on Nov. 18th, his bowels generally acted once, occasionally twice a day. His recovery was retarded by an attack of gastric catarrh. When discharged he was made an out-patient, his motions were then properly formed, and he was entirely free from pain. As far as I know he had no relapse.

CASE 2.—D. J——, aged thirty-eight, a sailor, has visited most parts of the world, but had no illness until the present, the commencement of which occurred at Hong Kong nearly two years before admission. It began with moderate severity, but continued during his voyage to San Francisco, where he went into hospital, and so far improved that his bowels acted only four or five times a day. In this state he remained until his admission into the London Hospital, Jan. 11th, 1879. He then had pain and tenderness throughout the course of the large intestine; abdomen distended and tympanitic. He was very weak and wasted. Tongue tremulous, but not red. His bowels were open upon the average five times a day, unless he walked about much, when they acted more frequently. Was ordered fifteen minims of the tincture of perchloride of iron three times a day, one drachm of cod-liver oil twice a day, five grains of compound powder of ipecacuanha night and morning, and a flannel bandage was applied round the abdomen. On Jan. 13th patient had five motions, mucoid and bloody; 14th, five; 15th, four; 16th, four; 20th four. (On this day he had an enema of perchloride of iron, three drachms of the tincture to three pints of tepid water).—21st: Four motions; less pain, but still some blood.—22nd: Three. For the first time since the commencement of his illness the patient slept throughout the night without the bowels acting.—24th: Three motions, fair sized, semi-solid, with trace of blood. No motion in the night. Enema, as before, repeated.—29th: Three motions, still trace of blood; less pain; feels better.—Feb. 1st: Three motions, semi-solid; no blood.—12th: Three motions; trace of blood; enema repeated. Has had middle diet up to now; to have nothing but milk.—15th: Had an attack of pharyngitis, which passed off in a few days. Temperature 102°.—17th: For the first time in nine months has only defecated once in the twenty-four hours. The motion was slimy.—18th: The motion to-day consists of two hard lumps and a little bloody mucus.—21st: No blood or mucus in stools.—25th: Has a bearing-down pain, and his motions are again more liquid. On this day I noted, "Since Feb. 8th patient has had no food whatever, except milk. During this period his bowels have acted on an average about once a day. The motions have been semi-solid, slatish-brown from iron, sometimes with, sometimes without, mucus. He has been free from straining. To-day he feels weak and depressed, and his bowels have acted three times in the twenty-four hours, with a good deal of straining. Pulse 117; temperature 100·8°. He complains much of cold in his extremities. His tongue is coated, and rather tremulous. The abdomen is not remarkably distended; there is tenderness on pressure in the left hypochondrium, over the descending colon, and slightly over the ascending colon. The colon rises slightly in the right hypochondrium. He is wasting."—26th: Seven motions; much bearing down.—27th: An enema of nitrate of silver (one drachm to three pints of tepid water) administered. The whole returned in about ten minutes. He felt no pain, and passed a good night subsequently. The bowels were moved three hours after the injection. There was no tenesmus then, and there has been none since.—28th: Bowels not acted for eighteen hours.—March 1st: One motion in twenty-four hours.—4th: Two; bearing-down pains have left him. Is cheerful, but still losing flesh.—13th: Nitrate of silver enema, as before, repeated. Half only came away in about thirteen minutes, so an injection of chloride of sodium was given. He felt a little sick and faint during the operation.—16th: No motion for thirty-six hours; the last was nearly formed.—25th: Bowels moved, after being confined for two days and a half. Allowed bread in addition to milk.—April 2nd: Bowels not moved for two days.—4th: Allowed minced meat.—6th: Allowed to get up for two hours daily.—10th: Allowed to be up half the day.—16th: Pudding added to dietary.—19th: Bowels acted five times; motions liquid and dark; no blood. No cause for diarrhœa discovered.—20th: Two motions.—21st: None.—May 3rd: Bowels open once daily; motions well formed; no bearing down at stool or pain. Is still weak. Allowed a chop.—May 17th: Improvement maintained. Sent to the country. At the end of a month he returned to show himself. His bowels were acting naturally, the motions solid and well formed. About a year later he presented himself again, having been to sea in the meanwhile. He came not for himself, but to bring a messmate afflicted with dysentery. He told me his health had been good since leaving the hospital, and that, though exposed to the exciting causes, he had had no further attack of dysentery. This case was a very serious one, and the disease had lasted nearly two years. He was wasted and extremely weak on admission, and did not benefit in the least by the rest in bed, or from the Dover's powder and iron taken internally. Large enemata of perchloride of iron effected trifling good, but it was not maintained. A purely milk dietary, moreover, did not suffice, in conjunction with the other measures, to arrest the flux. The effect of the first nitrate of silver enema when the patient was worn out with the disease and, in my opinion, in serious danger of losing his life was immediate and striking. A second enema sufficed to cure the disease that had lasted so long and brought him so low. It is instructive, too, to note that after the nitrate of silver enemata the return to a solid dietary occasioned no recurrence of the diarrhœa.

CASE 3.—R. C——, aged twenty-nine, under my care at the London Hospital for hæmato-chyluria, contracted in India two years and a half before admission. Dysentery developed when he was under treatment in the Calcutta Hospital for the above complaint. He passed slimy motions, with but little blood, about six times in the day, and nearly as many times in the night. The condition had lasted unabated during the voyage home, continued after he came to this country, and persisted for more than a month whilst in the hospital, the treatment not being directed against this symptom. On Feb. 10th, 1880, it was noted: "The condition of his bowels produces much discomfort. He has to go to stool about eight times in the day and four times in the night. The motions are partly formed and coloured, with a good deal of slime, and occasionally a little blood. Their passage is attended with a good deal of straining." On Feb. 13th an enema of half a drachm of nitrate of silver to three pints of tepid water was given. A subsequent note says: "Since the enema was administered the bowels have acted once, and occasionally twice, in the twenty-four hours, and he has never had to get out of bed during the night. The motions are solid and well-formed, free from mucus and blood. He remained under treatment for the chyluria, but the dysenteric diarrhœa was entirely removed. The patient took a chop and plenty of mixed food daily throughout the treatment. Here a single enema of half a drachm of nitrate

of silver cured a condition which had lasted two years and a half.

CASE 4.—C. S——, a Norwegian sailor, aged twenty-three, was admitted on July 7th, 1880. He contracted dysentery on the voyage home from the East Indies in the previous February. Bowels acting about five or six times daily, on admission. Motions reddish-brown, with foul odour, separate into liquid and semi-solid layers. There appeared to be some membranous shreds and a good deal of mucus in the stools, and a few pieces of solid fæces (scybala). Treatment: milk and beef-tea diet; ten grains of Dover's powder twice a day.—14th: Since admission bowels have acted from four to six times in the twenty-four hours. As a rule there is no pain, but now and then there is a little griping. If patient does not strain at stool no blood passes. This morning motion of light colour, partly solid. To take, instead of the Dover's powder, twenty minims of dilute sulphuric acid and one ounce of the decoction of logwood, twice a day.—24th: Patient a little better. About three motions daily, in which is no blood; six minims of the tincture of opium added to mixture.—Aug. 11th: Patient now passed two motions a day. Motions are liquid and painless, unless scybala are present, when there is straining. No blood, and stools not so offensive. Has occasional griping pains. Has remained, as regards the bowels, in a stationary condition for some time, but has gained three pounds in weight during last week. An enema of half a drachm of nitrate of silver in three pints of tepid water administered. Returned in five minutes, without pain.—13th: No effects from injection; state as before.—21st: Yesterday an enema of one drachm of nitrate of silver to three pints was given, because the motions were becoming looser, and accompanied by slight griping pains. The injection gave but little pain. A hypodermic injection of morphia was given to ensure a good night's rest. He passed a tolerably comfortable night, and now has no pain.—24th: Since injection bowels have been moved twice daily. The motions are still loose, but of lighter hue. There are no scybala and no blood. He had slight griping this morning.—25th: Bowels moved once this morning; motion fluid, with a few scybala. An enema of one drachm of nitrate of silver.—26th: Bowels not opened last night, and only once this morning; motion fairly solid, more so than any previous one; no blood; no pain.—31st: Enema of nitrate of silver, one drachm to three pints. Motions more solid; no blood; no pain. Feels he is gaining strength.—Sept. 4th: Enema of nitrate of silver, a drachm and a half to three pints.—6th: Is not improved. Bowels open twice a day; motions not more solid than formerly; no blood.—13th: Nitrate of silver enema, a drachm and a half to three pints.—16th: Remains the same. Bowels open once a day; motions still loose.—20th: The longest time patient has gone without his bowels acting is forty-eight hours. Since last injection has had only one solid motion. Motion passed to-day, liquid, of natural colour; no blood; no pain. Enema of nitrate of silver, a drachm and a half to three pints given. After this last enema the patient improved, the motions becoming more solid. He was made an out-patient on Sept. 25th, and remained under my observation some time without having had any serious relapse. This, though not severe, was a very intractable case. The influence of the injections was less marked, but the stronger ones eventually and gradually arrested the disease.

CASE 5.—U. W——, a Finn sailor, aged twenty-six, was admitted July 13th, 1880. He contracted dysentery at Zanzibar in April, which continued unabated until he came to the hospital. On admission bowels open about twelve times a day. Stools liquid, mixed with blood, dark-brown, and contained scybala. A good deal of tormina. Ordered twenty minims of dilute sulphuric acid, one ounce of the decoction of cinchona, three times a day; milk and beef-tea.—July 17th: Motions loose and bloody; a good deal of griping pain.—20th: Ten grains of Dover's powder twice a day.—22nd: Much griping pain along the course of the colon; bowels open twenty times during the last twenty-four hours. Much blood and mucus.—23rd: Fifteen motions in twenty-four hours, contain much blood and mucus; no scybala.—26th: Thirteen motions; much blood and pain, which are restrained by subcutaneous injections of morphia.—Aug. 5th: Enema of thirty grains of nitrate of silver to three pints of tepid water given last night. As it did not return in a few minutes an injection of chloride of sodium was given. This last caused much pain, which was relieved by a hypodermic injection of morphia. This morning he says he feels much better; has no pain in the abdomen or rectum. Bowels have acted once this morning, in all four times since the injection. To have pudding.—10th: Bowels now move twice, and occasionally three times, in twenty-four hours; no pain. Taking cocoa and two eggs.—18th: Pain in region of the navel. Bowels opened eight times, motions dark reddish-brown, mixed with blood.—21st: Enema of one drachm of nitrate of silver, preceded by soap-and-water enema. Returned quickly, and not accompanied by much pain. Bowels opened nine times.—25th: Bowels open two or three times a day; one motion solid.—28th: Motions were becoming quite solid, but yesterday after pain they became as liquid as at commencement.—31st: Enema of nitrate of silver one drachm to three pints. During the night several liquid motions, some containing blood.—Sept. 3rd: Bowels moved once this morning, the first time for twenty-four hours; motion firmer but not solid. No blood. To take one ounce of the quinine mixture three times a day.—4th: Enema of nitrate of silver, one drachm and a half to three pints.—8th: Bowels act once a day. Motions more solid.—11th: Bowels act twice; motions loose; no blood; some pain. Enema of nitrate of silver, one drachm and a half to three pints, ordered.—16th: Bowels open only five times since injection—i. e., in six days. Motions solid. Feels his strength returning rapidly.—21st: Enema of nitrate of silver, one drachm and a half to three pints, preceded by a soap-and-water enema.—27th: Bowels open five times yesterday. The motions have become loose, and to-day he has passed a considerable quantity of blood.—30th: Not feeling so well. Motions semi-solid, about three a day. To have ten grains of Dover's powder.—Oct. 2nd: Enema as before; not retained more than two minutes.—5th: Enema repeated; not retained more than one minute.—9th: Enema repeated.—13th: Enema, returned immediately and caused pain.—17th: Enema; pain prevented by a hypodermic injection of morphia.—25th: Since last injection bowels moved three times in twenty-four hours. Stools fairly solid and free from blood.—31st: Enema repeated. Mixture of quinine and iron, one ounce three times a day. Has gained five pounds in weight during the last fortnight.—Nov. 5th: Bowels acted twice daily.—26th: Motions have been very solid lately, only one during the last thirty-six hours.—Dec. 8th: Bowels act regularly once in twenty-four hours.—23rd: Bowels confined. Olive oil enema, and an enema of starch and opium, fifteen minims, every morning.—Jan. 17th, 1881: Made out-patient to day. Bowels since beginning of December opened only once a day. Has not passed blood for three weeks. Motions rather hard, and in consequence painful. Temperature normal for many weeks. Has gained 1 st. 2 lb. since admission. This case, it will be seen, was the most intractable of the whole series, and only yielded after repeated injections. The injections caused more pain in this than in any other, but the pain was subdued by simultaneous injections of morphia subcutaneously. Defecation was painful when the fæces became formed, but a daily enema of starch with a very small quantity of laudanum relieved this condition. The patient remained under my care as an out-patient for some weeks without any relapse.

To summarise the results I have detailed I have placed them in a tabular form.

Cases.	Duration of disease previous to treatment.	No. of injections.	Duration of treatment.	Result.
1	5 months*	1	5 weeks	Cure
2	2 years	2	11 weeks	,,
3	2½ years	1	Effect immediate	,,
4	5 months	7	6½ weeks	,,
5	3 months	12	23 weeks	,,

* Also previous attack.

A few words on dietetic and some other points in the management of cases of chronic dysentery may not be considered out of place. The constant drain of fluid from the system, and the disturbance of the mucous membrane of the alimentary canal, render the latter almost incapable of performing its natural functions. We may gain some idea of the condition of the mucous membrane of the stomach and small intestine from the appearance presented by the stomach in many of such cases. It becomes red and shiny, smooth and bald, owing to imperfect development of the

epithelium and papillæ. It is very important with mucous membranes in such a state to give food that is most easily assimilated. Milk, with or without admixture with lime-water, beef-juice, and beef-tea should alone be given in severe cases, and in the most extreme form of gastro-intestinal irritability peptonised milk, gruel, or beef-tea. In the cases treated with large nitrate of silver enemata, it will not, as far as my experience goes, be usually necessary to restrict the diet to the same degree as in cases otherwise treated. When there is pain along the colon, small doses of Dover's powder, two or three times a day, will be useful. Patients with dysentery, acute and chronic, are very susceptible to cold, and exposure to cold often occasions a relapse, in the same way that it determines an acute primary attack. It is important therefore to keep the patient in bed, in a chamber of warm and equable temperature. It is especially necessary to protect the abdomen from cold. A flannel bandage round the abdomen, as employed for this purpose in the navy, has the double advantage of securing this result and giving support to the relaxed and enfeebled abdominal walls. Its efficiency is still further increased by rubbing into the flannel dry flour of mustard. I ought not to omit to mention that Sir Joseph Fayrer highly advocates the fresh bael fruit in cases of chronic dysentery. It can now be obtained from Squire of Oxford-street, in the form of a confection.

In conclusion, to recur to the points I wish to insist on:—

Dysentery, whether constitutional or local in origin, has its local expression in ulceration of the mucous membrane of the colon.

This ulceration is most efficiently treated, as ulceration elsewhere, by local applications.

The local applications most useful are enemata of nitrate of silver, so large as to come into contact with the whole of the affected mucous membrane.

Postscript.—Since this paper was read Mr. J. H. Drew has informed me that twenty-five years ago, when on a ship, he landed a patient at the Mauritius suffering severely from dysentery. On visiting his patient a few days later he found him much better, and he was informed by the medical officer at the hospital that the improvement was due to enemata of nitrate of silver, a scruple to the pint, which they always used for the complaint. Of this solution at least two pints were injected.

Finsbury-square, E.C.

ON A CASE OF

SUPPURATION IN THE HIP-JOINT OF AN INFANT.[1]

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THE patient in the following case is, from many considerations, of great interest. She has been the subject of acute suppuration in the hip-joint, from which, under active treatment, she has recovered with absolute completeness, there being no stiffness even at the articulation; she has only just completed the first year of her age. The history of her case affords a fitting appendage to those knee abscesses which were shown at the Society at the beginning of last year, and which were reported in THE LANCET of Feb. 12th, 1881.

On Nov. 16th last, the mother brought the little sufferer to me, with the following history:—About a week since, her baby, who was then seven months old, was, with other members of her family, the subject of chicken-pox; and during the progress of this disease it was noticed that whenever the baby was moved, or the left foot was touched, she screamed and was evidently in great distress. The doctor who was in attendance (so the mother says) attributed the pain and restlessness to "wind in the stomach," for which, during the next two or three days, a course of fomentations was adopted; but this had not the effect desired. Indeed, in spite of it, the disease, whatever it might be, was gathering force. At this time the mother happened to notice a swelling at the upper part of the thigh as she was washing the child, and on showing it to the doctor he at once remarked that there was disease going on in the hip, and, telling the mother that it must necessarily be a long case, he advised her to take it to the Children's Hospital in Great Ormond-street, where it became an out-patient, under me, on Nov. 16th last, as I have before remarked. The doctor's diagnosis was correct; indeed, there was no room for doubt. The thigh was firmly and rigidly flexed upon the abdomen; to attempt to rotate it was greatly to increase the child's distress. The skin about the tender part was neither red nor heated, but there was a marked fulness in the gluteal region. The child had had but little rest, or care for food during the previous week. The diagnosis there and then written upon the prescription sheet was "acute effusion into the left hip-joint."

It is quite possible, in view of the free movement which the limb now possesses, some surgeons may be inclined to question the correctness of my diagnosis—to doubt if the hip-joint was either then or at any subsequent time the seat of abscess. Might not the suppuration of which I am about to speak have been peri-articular, or even simply sub-fascial? My reply is that the abscess was in the joint, and for these reasons:—The severity of the local and constitutional trouble; the flexed and rigid condition of the thigh; the pain caused by jarring the leg or foot. The infant was not the subject for treatment by a stirrup and weight, so we contented ourselves with bandaging the feet and legs together (in order to obtain the nearest approach to rest for the diseased joint), and in prescribing a carminative mixture. And, if I may trust my memory, I would say that the thigh was poulticed.

On the third day, when I saw the patient again, she seemed to be a little better; but I told the mother that unless there were a decided improvement by the time of her next visit I should be compelled to do something to give relief. Four days subsequently, when the child was next brought (that is, a week after our first interview), there was no improvement. An attempt to bring down the thigh gave evident and intense pain, and was accompanied by the characteristic arching of the loins. Still, although there was great fulness, there was neither redness nor heat of the surface. Mr. Kempe administered chloroform, and when the child was fully under its influence we found the thigh to be as rigidly flexed as ever. A fact is this of equal interest and importance. With a small scalpel I punctured the skin just above and in front of the great trochanter, and then, putting the knife away, I thrust a director deeply down in the direction of the articulation. This allowed the eager escape of pus; and to ensure the complete evacuation of the abscess the closed blades of a pair of dressing forceps were directed into the cavity, and were withdrawn widely separated. Much pus was voided, and then the abscess cavity was thoroughly washed out with warm water coloured with tincture of iodine. After this operation the limb came down almost straight. A good-sized drainage-tube was introduced into, and a pad of carbolised tow was firmly bandaged over, the hip, and for the next few days, and then at increasing intervals, the child was brought to the sister, who syringed out the cavity as I had done. A rapid convalescence at once set in, and each time I saw the child the limb was found capable of more movement.

There are four points which I think specially deserve consideration. The first is, What was the cause of the rigid flexion of the thigh? The others are—How, When, and Where should the surgeon open a hip-joint that is the seat of acute suppuration?

My explanation of the cause of the rigid flexion of the thigh is that it is, at any rate at first, the direct result of effusion into the synovial membrane. The condition may be imitated easily enough upon the cadaver by injecting fluid into the articulation by a perforation made into the acetabulum from the pelvic side. Contraction of the psoas, the adductors, and certain other muscles, may take place subsequently, in order that the joint may be kept in the condition of least tension—that is, of flexion. If the flexion were due simply to reflex irritation of the muscles supplied by the obturator nerve, we should have been able to have effaced it by the influence of an anæsthetic, for surely the contraction of ten or fourteen days would not have rendered the muscles permanently shortened.

Secondly, How should a hip-joint abscess be opened? The orthodox answer to this question is, I suppose, "Under the spray." But with this little child as a witness for the defence I do not mind laying myself open to accusation when I say that joint abscesses need not its sheltering influence provided that attention is given to the following indications:—That the opening into the abscess is free, that adequate drainage be ensured, that the cavity be kept

[1] Read before the Medical Society of London, April 17th, 1882.

washed out clean, that the limb be maintained at rest, and that at the earliest moment the surrounding tissues be subjected to what Gamgee calls "soothing surgical pressure."

Next, When should a hip-joint abscess be opened? I am inclined to say, "As soon as the presence of pus is diagnosed"; the more acute the symptoms the greater the need for decisive action. Why, I would ask, are we so prone to adopt the Fabian policy when dealing with hip abscess? Is it because we are in the habit of seeing articular collections of pus become absorbed? Or is it because our hip-joint abscesses generally leave us so extremely unsatisfactory a result of treatment? If the latter, does not the very admission seem to indicate the advisability of an earlier interference?

Lastly, Where should the abscess be opened? To that I would answer, "Through the line of least resistance," and, from the frequency with which Nature opens such an abscess near to the front of the great trochanter, I would suggest that the surgeon should work down, inwards and backwards, in front of the tensor fasciæ femoris, and reach the swollen capsule in front of the anterior borders of the middle and small gluteal muscles. Employing the scalpel for dividing the skin only, he may proceed with the use of the director and dressing forceps without subjecting the divisions of the external circumflex vessels to serious risk of injury.

A CASE OF SO-CALLED ECZEMA OF THE NIPPLE AND AREOLA.

DESTRUCTION OF THE AREOLA; ARREST OF THE DEVELOPMENT OF CANCER.

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THE attention of the profession having been recently drawn to cases of this disease hitherto rarely observed, or imperfectly understood, primarily by Sir James Paget, and afterwards by Dr. Thin and Mr. Butlin, I have thought that the narration of a case where, the disease being recognised, its extirpation has resulted in the arrest of any further development of malignant disease in the mamma, might not prove uninteresting to the profession. Sir James Paget in vol. x. of the St. Bartholomew's Hospital Reports, p. 87, thus opens the question: "I believe it has not yet been published that certain chronic affections of the skin of the nipple and areola are very often succeeded by the formation of scirrhous cancer in the mammary gland. I have seen fifteen cases in which this has happened. In all of them the disease began as an eruption on the nipple and areola. In the majority it had the appearance of a florid, intensely red, raw surface, very finely granular, as if nearly the whole thickness of the epidermis were removed; like the surface of very acute diffuse eczema, or like that of an acute balanitis. From such surface, on the whole or greater part of the nipple and areola, there was always copious, clear, yellowish, viscid exudation ..... I have not seen this form of eruption extend beyond the areola ..... It has happened in every case which I have been able to watch that cancer of the mammary gland has followed within at the most two years, and usually within one year. The eruption has resisted all the treatment, both local and general, that has been used. The formation of cancer has not in any case taken place first in the diseased part of the skin. It has always been in the substance of the mammary gland, beneath or not far from the diseased skin, and always with a clear interval of apparently healthy tissue. The simple noteworthy fact found in all these cases is that which I have stated in the first sentence; and I think it deserves careful study. For the sequence of cancer after the chronic skin disease is so frequent that it may be suspected of being a consequence, and must be always feared, and may be sometimes almost certainly foretold ..... In practice, the question must be sometimes raised whether a part through whose disease or degeneracy cancer is very likely to be induced should not be removed ..... I have had this done in two cases, but, I think, too late."

I shall next quote from a paper by Dr. Thin in vol. xxxii. of the Transactions of the Pathological Society, p. 218, "On the Connexion between Disease of the Nipple and Areola and Tumours of the Breast":—

"In the following paper I give an account of two cases in which a diseased condition of the nipple preceded the development of a tumour in the breast. They belong to the class of cases which have been recently described as instances in which cancer of the mammary gland followed a condition of the nipple described as eczematous. M. K——, aged forty-nine, single, pricked the nipple of the left breast six years previously to admission into the Middlesex Hospital ..... The linen was often found glued to the irritated surface by a yellowish, watery discharge. The nipple then began to swell. Six weeks after the injury it was found raw by a surgeon at the Westminster Infirmary ..... The sore spread, and, although continually under treatment by ointments and lotions, it never healed. On admission there was a nearly circular superficial ulceration, two inches in diameter, of which the centre point is not a depression. The hole is glazed over with a gelatinous, yellowish secretion, and is large enough to admit the tip of the index finger. Beyond the hole ..... there is a bright red, eczematous surface, for the most part moist and glistening ..... The whole of the mamma to the outer side of the sore is fuller, harder, and more resisting than the rest of the gland. The breast was removed." On examination it was found to be the seat of cancer.

"The other case," to quote still Dr. Thin's paper, "is that of a patient of Mr. George Lawson, who excised the breast. An unmarried woman, aged fifty-seven, had suffered for more than twelve months from a superficial affection of the nipple, which was termed by Mr. Lawson 'eczema,' and was recognised by him as similar in its nature to a case previously under his care, in which the affection of the nipple was, after three years, followed by a tumour in the breast. The disease of the nipple lasted more than twelve months, although various remedial measures were tried. There was no pain in the breast and no enlargement of axillary glands. Mr. Lawson informs me that neither Sir James Paget, who saw the patient in consultation, nor himself, discovered a tumour in the breast. The operation performed by Mr. Lawson was purely prophylactic, and was intended to forestall the formation of a breast tumour."

In his observations on these cases Dr. Thin remarks: "First as regards the skin. It was natural that a red, moist surface, which did not ulcerate, should be considered as eczematous, and the term eczema of the nipple was applied to the affection when the first cases were described. In none of the six cases with which I am cognizant, however, could this term be applied in the strict scientific sense of the word. ..... To speak of this affection as eczema of the breast, or psoriasis of the nipple, is likely to convey the idea that the superficial skin affection is really eczema or psoriasis. The histological examination of these six cases has shown that this is not the case. ..... It will probably be convenient to speak of this disease as *malignant papillary dermatitis of the nipple*. Mr. Butlin has described, in the Transactions of the Royal Medical and Chirurgical Society, vol. lix., four cases in which this disease of the nipple preceded the development of cancer of the breast. ..... The hypothesis which best explains the incurable dermatitis of the nipple and the extension of cancerous development downwards through the ducts, is that a change takes place in the columnar epithelium at or near the mouths of the ducts, which exerts a destructive influence on the adjacent connective tissue, and propagates an abnormal growth of duct epithelium. Such a change is, in reality, the first stage of cancer. The long duration of the local symptoms before the development of a perceptible breast tumour is analogous to the comparatively slight and very chronic cancerous changes that characterise the first stages of rodent cancer."

In the same volume (xxxii.) of the Pathological Society's Transactions from which the above quotations are taken is an account of a card specimen shown by Mr. Hutchinson for Dr. Macnaughton Jones of Cork. "The patient, a married woman, had suffered from eczematous discharge around her right nipple for upwards of five years. During the last year another distinct tumour had developed in the axillary border of the breast. ..... Microscopic sections from the more recently developed tumour show it to be a soft form of scirrhus."

I will next quote briefly from a paper by Mr. Trentham Butlin in the Medico-Chirurgical Transactions, vol. lix., "On the Minute Anatomy of Two Breasts, the Areolæ of which had been the seat of Long-standing Eczema." After

referring to Sir James Paget's paper, quoted above, he proceeds to give the cases, as follow:—"No. 1. The first was removed by Mr. Savory, in the case of a lady aged fifty-seven, who had suffered from an extremely obstinate eczema of the nipple and areola of long duration. No relief followed treatment, although, amongst other measures, the free application of strong nitric acid was employed. ..... The breast did not exhibit to the sight or touch any induration save that produced in the integument of the nipple and areola and for a short distance below them. The nipple no longer projected. It appeared to be absent. The whole areola was scabbed over. No. 2. The second case occurred in a woman aged fifty-two, under Mr. Smith's care at St. Bartholomew's Hospital. The disease had existed three years. ..... The condition of the nipple and areola was very similar to that noticed in Mr. Savory's case, but, in addition, there was a good deal of induration at the upper and inner part of the breast. After removal this induration had much the same appearance as certain forms of cancerous infiltration."

In vol. lx. of the Medico-Chirurgical Transactions, Mr. Butlin contributes a paper on two further cases of the same disease:—"Case 1: Mr. Savory's patient, a lady aged sixty-six, in whose breast a tumour had only been noticed for seven weeks. The appearance of the tumour was preceded by an eczematous condition of the nipple and areola, but only by a very short interval, about a fortnight. Case 2: Sir James Paget's, that of a lady, aged forty-eight, who had suffered from eczema of the nipple and areola of about three years' duration. The breast had remained apparently quite healthy until three or four months ago. Amputation was performed in October, 1876 ..... The nipple was retracted ..... its surface was here and there rough and eroded. An eczematous patch occupied about one-half of the areola, spreading on to the side and up to the free surface of the nipple. This patch was raised, indurated, uneven, and scabbed over." Among the conclusions Mr. Butlin draws is: (1) That a certain relation existed between the eczema of the nipple and the areola and the carcinoma of the breast.

In corroboration of the foregoing observations, I will now proceed to state my own case, which will be found to correspond in a marked degree with those I have quoted, and in which the treatment has apparently resulted in complete prophylaxis.

CASE.—E. A. P——, aged forty-five, married eighteen years, consulted me on Jan. 5th, 1880. She had been pregnant thirteen times; seven children had been born at term, three prematurely, and she had had three miscarriages; the last child was born four years previously. The catamenia commenced at thirteen, and had been regular up to nine months ago, since which time they had recurred every two weeks, lasting only one day. For six or seven years she had suffered from a burning pain beginning with fulness and aching above the right inguinal region, and which then settled in the groin itself, and through the right hip to the back. She could not walk without pain. I found on examination that the uterus was movable, the cervix bulky, congested, slightly dusky, granular, tender to the touch, with a submucous hardness; the uterus measured three inches. She had been under treatment, with but slight relief. I laid her up, and in about five months she was fairly well from the condition of areolar hyperplasia. One day she drew my attention to her left nipple, which she said had been bad for three years. It presented exactly the condition described, as quoted above, by Sir James Paget—viz., a florid, brilliantly red, raw surface, finely granular. The nipple was to all appearances obliterated, it and the areola presenting one unbroken flat raw surface. She had been treated with various remedies, but without any relief. I called Sir James Paget in consultation, and when he saw the patient he said it was a most typical case of that condition of the nipple and areola to which he had drawn attention. On examination of the breast he gave it as his opinion that, although there was some thickening of the gland, there was not as yet any evidence of malignant deposit. He recommended the total destruction of the whole nipple and areola as affording probably the only safeguard against the development of cancer. I therefore placed the patient under an anæsthetic, and, guarding the surrounding skin by folds of lint soaked in vinegar, I destroyed the whole areola with potassa caustica in seven minutes, till I reached the underlying fat. When the slough separated there was a rather smart attack of secondary hæmorrhage, but the wound healed perfectly, leaving a smooth flat cicatrix. This was in May. On November 22nd the scar was a little tender, but the mamma felt much more soft and natural.—Feb. 22nd, 1881: The left mamma feels perfectly healthy, though the patient complains of a little pain through the point of the left shoulder. The catamenia had become natural, lasting two days, of fair amount, with but slight pain.—October 13th: The breast keeps well. There is merely a slight thickening of the gland S.E. from the nipple. The uterus feels quite natural and healthy.—January 31st, 1882: The cicatrix is now paler, and the whole breast is uniformly soft and healthy; there is no tenderness, although the patient still complains of a burning sensation from the tip of the shoulder down the arm. The other breast remains healthy.

This case is one of extreme value as elucidating the history of this hitherto obscure malady; and although we have, fortunately, not had the opportunity of making sections of the breast itself, yet, having regard to the opinion of so great an authority as Sir James Paget, we have here the destruction of the disease, which he and other observers have recorded as invariably followed by the development of cancer, resulting in complete prophylaxis, and the interval (twenty-three months) that has elapsed since the treatment gives us good reason to believe that the case is one of entire cure. If the narration of this case lead to more careful observation and records of similar cases, and to their early treatment in the manner thus laid down, the publication of this paper will not have been in vain.

THROMBOSIS OF THE EXTERNAL JUGULAR AND SUBCLAVIAN VEINS, CAUSED BY ANEURISM OF ASCENDING AORTA.

BY JAMES MORE, M.D.

ON Dec. 15th I was called in to see William B——, fifty-five years of age, for the following symptoms:—He was in bed and complaining of great pain and a feeling of tightness in the face, giddiness, and obscurity of vision; the nose, the lower part of the face, and both ears were blue and cyanotic. The right side of the neck was puffy and swollen, and the external jugular vein was bulging out, pulsating, and the seat of a large thrombus. Both pupils were contracted, and he saw the light of the candle as surrounded by a halo-like rainbow. These symptoms had all appeared suddenly, and he had been working steadily at his trade—that of a moulder in an iron foundry—up to three days before his attack. He had had rheumatic fever some years ago, and for some months back had been troubled with a cough on getting out of bed in the morning. Otherwise he seemed a fairly healthy-looking man, and his body was muscular and well-nourished.

On the third day of his illness his symptoms were all intensified. The cyanosis was more complete, and of a deep plum colour, and now extended down the right side of the chest. The ears were nearly black, and rather cold to the touch. The clot was still to be felt in the right jugular, and though there was a puffy, elastic, or "tippet-like" swelling of the entire neck, the left jugular was free either from pulsation or thrombus. The pulse at the wrist was weak and about 70 per minute.

On the eighth day the cyanosis was complete in the face, the neck, and the ears, and all over the chest wall, both before and behind, were capillary thrombi, or rather blocking of the external venous radicles, giving the appearance as if the chest had been tattooed. This marking followed closely the contour of the chest cavity, not reaching lower down in front than the ensiform cartilage, it dipped down on each side to the lower edge of the ribs both before and behind. That these were thrombi, and not mere varicose dilatations of the venous radicles, was evident from the fact that pressure did not obliterate them, and, besides, in many of the more decided of them a hard knot of clot could be felt. The jugular vein was still largely dilated and pulsating, but it seemed rather emptier than the day before. There were now superadded to his other symptoms: difficulty of breathing; respiration 28, and somewhat shallow; râles

over base of both lungs, with a certain degree of dulness on percussion on both sides, and bloody sputum. The cardiac dulness was considerably increased, and there was a harsh, blowing, systolic murmur over the aortic area.

On the eleventh day, the cyanosis in the face was not of so deep a colour, but replaced by a dark-grey tint, indicating great heart depression. During the last two days of his life the arteries of the forearm were quite empty, not a trace of pulse being felt at the wrist, though easily felt in the axilla. He could not lie down in bed, but sat in a chair by the fire, and at times he had fits of extreme restlessness, breathlessness, and anxiety. His extremities were now cold, and his nails blue and livid. At twelve o'clock on the 27th his nurse helped him into bed, when he quietly fell back and died.

A post-mortem examination was made twenty-four hours after death with the following result:—Livid thrombotic spots were seen on the front, sides, and back of the chest, though not so apparent as in life. On opening the chest, the heart, which was pale and flabby, was found displaced by a large aneurism on the ascending aorta. The pericardium was adherent to the lungs on both sides, and contained in its cavity a small quantity of clear serum. Heart considerably dilated. Right ventricle and auricle quite gorged with black clotted blood, clots chiefly post mortem. The tricuspid valve very much dilated and incompetent, and occupied to three-fourths of its extent by a large globular clot, which on its surface was slightly membranous and fibrous. Left ventricle empty, with the exception of a long, narrow, whitish clot, which lay along its posterior wall, but not engaging the aortic orifice. The aortic valves were slightly atheromatous, but competent. A large clot also occupied the right innominate, subclavian, and external jugular veins. The lungs were nearly black with blood-clot, the pulmonary arteries being completely blocked. There were old adhesions in both pleuræ, and about ten ounces of serum in the right pleural cavity. The aneurism, which was about the size of a large orange, was adherent to the surrounding tissues. The inner wall of the superior vena cava was incorporated with the wall of the aneurism and pericardium. On cutting into the aneurism, it was found filled with black blood-clot, and there was also a large whitish, fibrous-looking clot, evidently of earlier formation. The aneurismal walls were highly atheromatous, and almost bony in structure in some parts.

In a complicated case of this kind there is a difficulty in tracing out the sequence of pathological events. Here we have a man without any well-defined pre-clinical history, except perhaps that of an almost forgotten attack of rheumatic fever, complaining suddenly of pain and swelling in the neck, with intense cyanosis in the face and neck, the latter swollen with a pulsating thrombic jugular, congestion of the lungs, failure of the heart's action and death, and all this within the short period of twelve days. Any intelligent surgeon in reviewing this man's symptoms—in any stage of the attack—would at once conclude that the right heart, either in itself or its approaches, was in a state of siege or block. The tattooing on the chest wall, together with the deep cyanosis, would at once point to a block in the superior cava; for anatomy tells us that the face, neck, and chest form the blood-shed through the external jugular and subclavian to the superior cava or innominate veins.

Clinically speaking, and in the presence of such a case, we may recognise the broad physiological fact that the right heart is the termination of a vein, or, more properly speaking, of the venous system, just as the left heart is the beginning of the arterial system. Hence it is that in any case where we have cyanosis as a prominent symptom, indicating non-aeration or blood-stasis, as in the above case, or bronchitis, or croup, or emphysema, &c., we must be prepared to look for blood obstruction, or defect either in the right heart itself or some of its approaches, and this with a necessary or unavoidable pulmonary engorgement.

The initial factor leading up to B——'s unusual train of symptoms was undoubtedly the aneurism. By its gradually increasing pressure on the superior vena cava, a state of the cardiac circulation would be induced which could only be compensated for by a progressive hypertrophy and dilatation of the heart itself. This enlargement of the whole muscle was very apparent, as well as the great development of the musculi papillares. Granting this gradually increasing pressure on the superior cava, a point would be reached when a thrombus would suddenly form in the external jugular and subclavian veins. This thrombus would gradually extend down the innominate vein till the right auricle was invaded. The tricuspid valve would then become the seat of blood-clot, which by interaction would not only intensify all the symptoms, but gradually and surely lead to the fatal issue, for the right ventricle not being capable of propelling its contents into the pulmonary artery, on account of its (the ventricle) being gorged with thrombic clots, complete stasis would necessarily take place, not only in the large pulmonaries, but in the whole lung tissue, and thus bring about paralysis of the heart itself. The tricuspid was incompetent, on account of the large ante-mortem clot, which causing regurgitation into the auricle, would necessarily increase the jugular block, and account for the increasing dyspnœa, cyanosis, and pulsation in the jugular veins.

Again, it might be asked, Was the systolic bruit due to the aneurism or to the block in the tricuspid valve? It is evident that either complication might give rise to the same physical sign. The aneurism was not detected during life, though the state of the tricuspid valve and that of the heart generally was correctly diagnosed. What effect the pleuritic effusion in the right side had in initiating the chain of events in this case it is perhaps difficult to say, but I am inclined to think that the effusion was not the result of pleuritic inflammation at all, but an after result of the block in the right heart; and Meissner tells us that such serous effusions are by no means an uncommon result of the hyperæmia, brought about by thrombic or embolic obstruction.

I am sorry to close this paper by the confession that treatment was powerless in giving even palliative relief to the symptoms, which were no sooner fairly established than they rushed on unchecked till death closed the scene.

Rothwell, Northamptonshire.

CASE OF DIABETES INSIPIDUS TREATED BY ERGOT.

BY JOHN MACAULAY, M.D.,
AND
SAMUEL MACAULAY, L.R.C.P. ED., L.F.P.S. GLASG.

MR. W. A. C——, aged forty, came under our care in the beginning of December last, complaining of headache and disordered digestion, which were abundantly demonstrated by the appearance of his tongue, as it was covered with a creamy fur. He stated that for a short period prior to consulting us he had suffered from inordinate thirst and urination. His pulse was rather rapid the first time we saw him, but it was afterwards quiet. His family history was excellent, and he himself had enjoyed good health until about two years ago, when he suffered from an acute attack of Bright's disease.

On examination his urine was found to be pale, of acid reaction, specific gravity 1002, and containing traces of albumen, but no sugar. He was ordered stomachic medicines at first, which had the effect of improving the condition of his digestive organs; then he was placed upon iron and quinine for some three weeks, but with no amendment of the diabetic symptoms. As he was passing enormous quantities of urine—generally from eight to ten quarts per diem,—and was consequently losing flesh, we determined to try the effects of ergot, which remedy has been so successful in the hands of Dr. J. M. Da Costa, of Philadelphia, in the treatment of diabetes insipidus. Accordingly he was prescribed drachm doses of the liquid extract of ergot three times a day, on Jan. 3rd. There was no change observed in his condition until the 7th of the same month, when slight diminution of thirst and diuresis took place, and, at the same time, the slight pain which he had complained of in his head now became so very severe that it was necessary to discontinue the administration of the ergot. In the course of a day or two the pain in his head had considerably abated, but the thirst and urination again increased. The ergot treatment was resumed on the 12th of January, in similar doses, and on the 23rd the intense thirst and excessive urination suddenly gave way to the normal condition of things in these respects; but again at this time he complained of the most excruciating pain in his head, which was relieved by withdrawing the ergot and giving a hypodermic injection of morphia. Since then there has been

no return of the urgent thirst and diuresis; but the pain in the head is subject to periodic exacerbations and remissions, and is neuralgic in its character. We have no doubt that it will be at least temporarily relieved.

Remarks.—The above, although an undoubted case of diabetes insipidus, was complicated with Bright's disease, and this fact rendered the result of the exhibition of ergot a matter of considerable doubt, but the satisfactory effect produced has fully justified the experiment. There was no slowing of either the pulse or breathing produced in this case by the administration of ergot. There can be no doubt, from the results in the cases of diabetes insipidus which have been recently treated with ergot, that it is a remedy which has a powerful control over this most obstinate disease; and if it can be proved to be an unfailing remedy for it in the future, then one more ailment will have been rescued from the category of "hopeless" diseases.

Newcastle-on-Tyne.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASE OF ENTERIC FEVER; HIGH TEMPERATURE REDUCED BY IMMERSIONS; RUPTURE OF RECTI ABDOMINIS MUSCLES; ULCERATION OF LARYNX; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. FINLAY.)

THE following interesting case illustrates some of the rarer and graver accidents of enteric fever:—

Joseph H——, a baker, aged thirty, was admitted on Dec. 23rd, 1881. There was nothing worthy of note in his family history, and as regards personal history, he stated that he had never been seriously ill before, but had suffered from winter cough for several years. He was in his usual health up to the 19th. On the 20th he had severe diarrhœa and retching, with loss of appetite and general malaise. He had been out of work and living badly for thirteen weeks.

On admission, the temperature was 101·4°; pulse 100, soft and compressible; respiration 40. The patient was described as a well-nourished man with fresh complexion, complaining of great weakness, diarrhœa, vomiting, and headache, with oppression of breathing. Occasional griping pains in the abdomen were also complained of, but there was no distension or tenderness on pressure. The liver and splenic dulness were normal, and no rose spots were visible. Expansion and resonance of the thorax were good, but on auscultation abundant sonoro-sibilant and mucous râles were heard over both lungs. The breathing at the left apex was harsh, and the expiratory murmur much prolonged. The heart sounds were masked by the loudness of the bronchitic sounds. The lips, hands, and feet were somewhat livid and cold; the tongue moist and not coated, except at the back. His diarrhœa continuing, he was ordered some chalk-and-opium and bismuth, and in addition four ounces of brandy daily. At 7 P.M. the temperature was 104·6°.

Dec. 24th.—At 10 A.M. the temperature was 105°, and his bowels had been opened five times during the night. An hour later the temperature was still 105°, and he was put into a bath at 72° for ten minutes. The bath reduced the temperature by 2°, but at 2 P.M. it had returned to 105°, and he was again bathed. After this bath the temperature stood at 101·6°. The daily allowance of brandy was increased to eight ounces. In the evening twenty grains of quinine were given, which had hitherto been withheld owing to the fear of vomiting being induced, and this served to keep up the effect which had been produced on the temperature by the bath; at midnight it was only 102·8°.

On the following morning the temperature was still moderate, being only 101·8° at 10 A.M. The bowels having been opened three times in the night and twice this morning, an enema of starch and opium was given, which was repeated later in the day owing to a continuance of the diarrhœa. At 7 P.M. the bath was repeated, the temperature being 104·4°, to which it had been gradually rising during the day. After ten minutes' immersion the temperature was found to have been reduced to 100·6°. Twenty grains of quinine were again given. Respiration 36; pulse 104, soft and compressible; tongue dry, and there were sordes on the lips and teeth; half a dozen rose spots were also observed on the abdomen. The splenic dulness was not increased.

During the night and the following day (the 26th) the temperature kept steadily rising, and at 6 P.M. it had reached 104·4°, when the bath was again employed and twenty grains of quinine given. After the bath, the temperature was reduced only by 1·6°; but it dropped gradually during the night.—27th: This morning (8 A.M.) the temperature was only 101·8°; pulse 104; and the patient stated that he felt better. During the day the temperature ranged between 101·8° and 103·2° until 8 P.M., when the thermometer marked 104·2°. There were abundant dry sounds audible over the chest, the pulse was dicrotous, the tongue dry and leathery, and sordes were thick on the lips and teeth. The bowels had been moved six times during the day.—28th: Tongue less dry; pulse 100; respiration 40. He had been delirious during the night, and trying to get out of bed; bowels opened four times. At noon the temperature was up to 104·8°, and the bath was again employed, and followed as before by twenty grains of quinine. After the bath the temperature was 102·6°. At 8 P.M. it rose to 104°, when another bath was given, followed again by the usual dose of quinine. After this the temperature was found to have been reduced by 4·4°, to 99·6°; at midnight it stood at 103°. Brandy was increased to ten ounces.—29th: The temperature at 9 A.M. was only 101°, having fallen during the night; pulse 100; respiration 32. During this and the two following days there seemed to be decided improvement—the diarrhœa and bronchitis being less, and the range of temperature considerably lower (averaging about 101°); but on Jan. 1st, the temperature rose from 100·4° at 10 A.M. to 104° at 1 P.M., when another bath was given. After this bath the temperature was 99·2°; and the highest point reached until midnight was 101·8°.

Jan. 2nd: The temperature remained comparatively moderate (from 100·4° to 102°); a twenty-grain dose of quinine was given, and the allowance of brandy increased to twelve ounces. The bowels were opened twice; he was delirious and picked the bedclothes; his respirations were 40, noisy and rattling, and his pulse 104.—3rd: No change apparent, except greater weakness and increasing impairment of respiration. The quantity of stimulant was further increased by an allowance of champagne.—4th: Subsultus and low muttering delirium now became marked, with an increase of sordes about the mouth and great hoarseness of voice. The pulse was 120. Turpentine stupes were applied to the chest and turpentine given internally. At 3 P.M. the temperature was 102°; pulse 130, and during the next two or three hours he had some slight convulsions heralding the approach of the end. He died at 9 P.M.

It should be mentioned in addition that a trace of albumen was on two occasions found in the urine, and that cold compresses were applied at times when the temperature had not reached a height calling for the use of the bath. Seven baths in all were given, the temperature of the water being always 72°, and the duration of immersion from ten to fifteen minutes. The temperature of the patient after the bath was taken in the axilla half an hour after removal. It may also be noted that enemata of starch and opium were given from time to time, as seemed desirable, with the view of controlling the excessive diarrhœa.

Necropsy.—The post-mortem examination was made eighteen hours after death by Dr. Fowler, and the following were briefly the appearances found:—The rectus abdominis on each side was ruptured about three and a half inches from its insertion into the pubes, the divided ends of the muscular fibres being separated for about three-quarters of an inch and coiled up, a black coagulum lying in the interval, and a considerable quantity of dark blood being effused in the vicinity. The bronchi contained blood-stained frothy mucus, and the mucous membrane was congested. The lungs were congested and œdematous. The liver was of a pale colour and fatty; the muscular tissue of the heart was pale; the spleen was soft, deeply congested, and swollen. Peyer's patches were ulcerated for a distance of three and a half feet from the ileo cæcal valve; and there

was a small ulcer on the posterior extremity of the right vocal cord. Microscopic examination of portions of muscle from the ruptured recti showed granular degeneration.

Remarks by Dr. FINLAY.—There are several points of interest in the foregoing case, of which it may suffice merely to indicate one or two. Regarded from the point of view of treatment, the effect of the bath is worthy of note. The average reduction of temperature was about 3°, in one instance as much as 4·8°, and this after so short a time of immersion as ten minutes would seem to show that the cold bath does not act merely by abstracting so much heat, but through the nervous system. It might seem to some that the use of the cold bath at all was contra-indicated in presence of the lung condition; but in answer to this it is sufficient to say that with a high and rising temperature the case presented at the best a choice of evils. That the lesser was chosen will appear when regard is had to the fact that in spite of the antipyretic treatment, the degeneration and consequent rupture of muscles which attend a high degree of pyrexia were found to have occurred. Retrospectively it would rather appear that the patient's only chance lay in the vigorous use of the bath. As to the pathological side of the case the ulceration of larynx and rupture of the recti are interesting, especially the latter, on account of its rarity. Hoffmann found only two instances of bilateral rupture of the rectus abdominis in 250 autopsies.

NORTHERN HOSPITAL, LIVERPOOL.

CASE OF CHRONIC CYSTITIS; CYSTOTOMY; RECOVERY; REMARKS.

(Under the care of Dr. W. MACFIE CAMPBELL.)

FOR the notes of the following case we are indebted to Mr. Hamilton, senior house-surgeon:—

Charles W——, aged twenty-seven, a sailor, was admitted on Jan. 15th, 1881. The illness dated from two months before admission, when, seven weeks after recovery from a swollen testicle from injury, he was much exposed during a stormy voyage to cold and wet. He found himself unable to retain urine, which constantly dribbled away from him, or was passed with straining and pain.

On admission, he had severe pain at the end of the penis, both before and after making water; marked incontinence of urine, with frequent painful attempts at micturition. There was congestion of the glans penis and prepuce, but no stricture of the urethra, nor stone in the bladder, into which the passage of a sound gave great pain. The urine was thick, ropy, fetid, and contained pus in considerable quantity. His bed and clothes exhaled a strong mousy, urinous odour.

During his stay in hospital all the usual methods of treatment were diligently employed, but without effect. Such internal remedies as buchu, uva ursi, benzoic acid, copaiba, solution of potash and henbane, belladonna, &c., and locally washing of the bladder with bismuth and morphia, quinine, dilute nitric acid, and suppositories of morphia and belladonna. Relief to the pain was given by hypodermic injections of morphia, but the disease went on from bad to worse. Continuous draining of the bladder by catheter and tubing was attempted, but, adding fearfully to the agony, had to be discontinued after a few hours. Under these circumstances, and especially as the general health was now much affected, cystotomy was determined upon.

On June 30th, 1881, under ether, the patient being in the lithotomy position, the ordinary lateral operation as for lithotomy was performed; the finger was passed into the bladder, and it was thoroughly explored. The cystic mucous membrane felt soft and velvety, and no ulcerated or gangrenous portions could be discovered. A drainage-tube was then passed into the bladder; a suppository of one grain of morphia into the rectum, and he was placed in bed. His progress was most satisfactory, and though weak, he was able to be out of bed in six weeks. At the end of two months he began to void urine per urethram with only occasional attacks of cystic pain; still it was considered advisable to enlarge the wound so as still to ensure complete drainage. In October the sinus was allowed to close, being occasionally cauterised to assist this process. He now went to the Walton Convalescent Home, but had to be again admitted, as the sinus still allowed a few drops to pass; this was remedied by excision of the sinus and deep stitching.

Remarks by Dr. CAMPBELL.—This operation, so successful in this case is thus alluded to by Professor Gross:—"The only rational treatment of ulcer of the bladder is to open through the perineum. Great difficulty would be experienced in keeping the wound sufficiently long open." He gives the history of five cases, not in his own practice. In chronic cases he says, "the proposal (i.e., of performing the lithotomy operation) is plausible. It is worthy of fair trial, and holds out the only chance of relief." In one case his anticipations were quite fulfilled, and we may look upon the proposal as more than plausible. The operation has once before been practised at this hospital, but the result was not favourable, and was put off in my case on this account as long as possible; but I should revert to it much earlier in another similar case.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Wounds of the Theca Vertebralis, with Discharge of Cerebro-spinal Fluid.—Treatment of Special Cases of Empyema by Thoracentesis and the Simultaneous Injection of Purified Air.

THE ordinary meeting of this Society was held on the 25th inst., John Marshall, Esq., F.R.S., President, in the chair. At the commencement of the proceedings the President read a communication from the Secretary of State, conveying to the Society the thanks of Her Majesty the Queen for their loyal address.

A paper was read on Wounds of the Theca Vertebralis, with Discharge of Cerebro-spinal Fluid, by Mr. T. HOLMES, who was unavoidably absent. Referring to a case published in the sixtieth volume of the Transactions, in which a copious flow of limpid fluid took place from a wound in the back, and in which it was believed that the ureter was wounded, though it was also admitted as possible that the fluid might have been cerebro-spinal, the author relates two cases: one under his own observation in a patient of Mr. Rouse, at St. George's Hospital, the other from THE LANCET, in which a similar copious discharge of watery fluid was caused by a wound of the spinal membranes, not involving any wound of the cord or large nerves, as proved in one case by post-mortem examination, and in the other by the position of the puncture. Such wounds do not of themselves produce any symptoms, the loss of fluid being gradual, and the fluid no doubt rapidly re-excreted. Inflammation around them may interfere with the functions of the cord or nerves, even to a fatal degree, and there seems some warrant for believing that the very sudden withdrawal of large quantities of the fluid (as in operation for spina bifida) may produce dangerous syncope.—Mr. HUTCHINSON alluded to the frequent and often copious and long-continued escape of fluid from the ear in head injuries without detriment; but had no facts to add as to wounds of the theca vertebralis. He had not seen immediately serious consequences following rupture or tapping of a spina bifida. Almost constantly, however, arachnitis follows rupture of spina bifida with a small opening; though he had seen one or two cases in which shrivelling of the tumour had ensued on what was described as a rupture of the sac. The liability to arachnitis following escape of the fluid would depend upon the kind of opening present.—Mr. T. SMITH concurred in the statement that the mere escape of fluid from a spina bifida is not followed by immediate ill effects; but if the flow last long, inflammation is liable to follow. He had seen cases which had continued to leak for days. He had seen cases of death and cases of recovery after spontaneous rupture of a spina bifida; in the latter case the sac shrivels up. He once saw a case where a mistake in diagnosis had led the practitioner to make a long free incision into the sac; and to his (Mr. Smith's) surprise the child rallied from its state of depression, although it even-

tually died. The fluid is very rapidly resecreted. As to treatment of the wounds described, there would be more chance of getting closure if treated at once; and the first case related by Mr. Holmes showed the difficulty there was in getting this result at a later period.—Mr. MORGAN had assisted Mr. Holmes in one of the cases referred to. It was that of an infant with a congenital tumour below the mid-dorsal region of a sausage shape, and pedunculated. Pressure had no influence on it; and it was therefore removed by an elliptical incision on either side; but when the incision divided the centre of the base of the tumour, the child became collapsed, was with difficulty restored and died in twelve hours. Mr. Holmes thought the result due to carbolic acid poisoning; and the urine was certainly blackened. The symptoms so resembled another case lately under Mr. Morgan's care that they might both be attributed to the direct effect on the spinal canal. This was a case of a somewhat larger tumour, also pedunculated and uninfluenced by pressure. It was tapped and cerebro-spinal fluid escaped, followed by immediate collapse, with temporary recovery. Morton's iodoglycerine was injected into the sac, the pedicle being secured by a ligature, but death took place in a few hours. He was at a loss to explain these events unless from a direct action on the nervous centres. He knew of a case in which the midwife with a pair of scissors slit up the spina bifida without ill result. So that it seems there is more danger when the opening is small than when it freely communicates with the canal.—Dr. WHARRY suggested that the reason why tapping a spina bifida was not followed by immediate effects was possibly due to the rapid reformation of fluid, and also to the subarachnoid trabeculæ not allowing a very great loss to take place.—The PRESIDENT, referring to the subject of wounds of the theca, thought the diagnosis could be rapidly made. Probably in all these cases the presence of some inflammatory action altered the characters of the fluid so that it contained more solid matter than normal. The result may depend on the seat of the wound; if high, being more dangerous than if low down; and also upon the subject wounded. If the wound was quickly closed, there seems no reasons why puncture of the theca should be so serious. The fluid has probably something more than a mere mechanical function. In a case of spina bifida in which he was about to inject iodine, the raising the child to a sitting position in order to safely inject the solution after drawing off six or seven ounces of fluid, produced syncope and a convulsive attack. Thus sometimes cerebral disturbance may be set up.

A paper was then read, entitled Suggestions for the Treatment of Special Cases of Empyema by Thoracentesis and the Simultaneous Injection of Purified Air, by Mr. R. W. PARKER. The author commenced his paper with the record of a case of empyema in a child aged three years and three-quarters, who had been in the East London Children's Hospital under the care of his colleague, Dr. H. Donkin. The physical signs pointed with great clearness to a very large effusion, but on attempting aspiration only four ounces could be withdrawn. A few days later a further attempt was made, with no better result, although the chest wall was punctured in two or three places. Finally a free incision was made, when between forty and fifty ounces of fluid were got out. The child ultimately recovered with hardly any deformity, although she had an attack of small-pox while the empyema was still discharging. The mechanism of tapping was then referred to. He reminded the Society that it was *vis a tergo* which expelled the fluid rather than a *vis a fronte* which sucked it out. Either the lung re-expanded, or the diaphragm rose, or the chest wall fell in. There were cases, however, in which, owing to rigidity of the chest walls and binding down of the lung, this expulsive force was reduced to a minimum, and additional means became necessary in order to empty the abscess cavity. Dr. Bouchut, of Paris, had published a case similar to his own, and had proposed to forcibly expand the lung through a tube introduced into the bronchus. Instead of this somewhat heroic treatment, it was suggested that filtered and carbolised air should be introduced into the pleural cavity in order to displace the fluid. A suitable apparatus for this purpose was shown, and its mode of use demonstrated to the Fellows present. At the completion of the operation it was stated that the air in the empyema cavity ought to be somewhat less dense than the external air, so that the lung might be in a position to re-expand from the first, while the gradual absorption of the air would keep up that advantage during the period of cure. It was contended also that the presence of air in the chest, under such circumstances, by supporting the vessels would tend to hinder the reaccumulation of fluid which a condition of vacuum, as under ordinary circumstances, would rather tend to promote. A case, under the care of Dr. Symes Thompson, in which this plan of treatment was successful was referred to. Instances also were mentioned in which there had been difficulty in withdrawing the fluid, depending on other causes, and particular stress was laid on them, for in such cases the injection of air into the pleural cavity would not suffice to overcome the difficulty. The author especially emphasised that his "plan of treatment is adapted chiefly for those cases in which the difficulty of getting out the fluid depends on rigidity of the wall of the empyema cavity." This condition is most likely to occur in adults, although the case mentioned at the commencement of the paper was a typical one, occurring in a young child. He recommended its trial before "free incision, which is a somewhat severe measure," is adopted.—Dr. SYMES THOMPSON said that in his patient's case, referred to by the author, the result of the plan, especially in freedom from the cough and discomfort, which often compel cessation of aspiration, was very satisfactory. He did not think the double opening necessary, and had recently adopted a device whereby air was admitted through the aspirator cannula. The method, as stated, was applicable to cases of chronic effusion with rigid chest walls; but although it might be of service in serous effusion, free openings were probably necessary in purulent collections, because all experience points to the desirability of free drainage in such cases. Mr. Marshall had lately indicated an anterior opening as the best site for puncture, that being the place selected by nature; but he (Dr. Thompson) thought a lateral position was more favourable for drainage. The ascent of the diaphragm interfered with free drainage in cases of opening in the posterior axillary line. As regards Mr. Parker's plan, the replacement of the fluid by purified air was an advantage; but it was open for discussion whether air or some fluid was the best medium.—Dr. DOUGLAS POWELL thought the idea ingenious, and said the case mentioned was one to which it was peculiarly adapted. The effusion was of old standing and the lung had been long bound down. In another case, under his own care, at Brompton Hospital, Mr. Hicks had performed an analogous operation. It was one where fluid had to be removed without altering the pressure within the chest, for it was complicated by a diseased and excavated lung; and it was feared that the mere removal of the fluid might induce rupture of the cavity. It was a question whether the replacing of fluid by air was not better done by making a free opening under the carbolic spray. In the first example given in the paper it was difficult to conceive that in a young child sixty-three ounces of pus should be retained in the chest during an attempted aspiration, unless the opening had become closed. He remembered the case of a lady where Mr. Arnott operated. It was a large empyema; and although a long bistoury was plunged up to the hilt, the fluid did not escape. It was quite a recent effusion, and its retention could hardly be explained on Mr. Parker's hypothesis. It was rather due to a loose layer of lymph lining the the costal pleura, which may not have been incised and had blocked the opening. This seemed to be the case, since after a plug of lint had been left in the wound a sudden evacuation of pus took place in the night, probably from the lymph becoming softened. The cases suitable for Mr. Parker's method were rare, being limited to those of rigid thorax and bound-down lung. In serous cases it was no advantage to remove all the fluid, the great object being to give rest to the lung, which was not obtained if all the fluid was removed; and it was doubtful whether replacing a pleura partially full of fluid, with carbolised air quite filling the pleura, was a gain. In purulent effusions the best method is to make at once a free incision. He advocated the employment of a manometer attached to the side tube, as giving information as to whether the cannula were blocked and whether the pressure in the chest were positive or negative.—Dr. REGINALD THOMPSON said that the cases related in the paper did not support the value of the author's suggestion. The first case was inapplicable; the cyrtometric tracing showing clearly that the empyema was pointing in front. In the case in which the plan was adopted only two ounces more fluid were evacuated than at the previous aspiration, and the measure required an additional opening. Nor did he think the third case supported the method.—Dr. COUPLAND considered the plan worthy of adoption in cases

of chronic effusion in old subjects; and mentioned a case in point where a hæmorrhagic effusion became purulent apparently in consequence of aspiration under these conditions, an issue which probably would not have occurred had pure air been injected to replace the fluid.—Dr. WARNER urged the special advantages of a double incision, as allowing of the free entrance into and exit of air from the pleural cavity. The lung remains at rest and the process of granulation on the diseased surfaces takes place satisfactorily. In two cases so treated the lung had completely re-expanded. Mr. Parker's method was likely to be useful in some cases, but it did not give rest to the lung.—Mr. F. HICKS had introduced air into the chest on this plan in three cases. The first was one of chronic effusion of six weeks' duration. Three weeks after operation fluid was still in the chest, and no further operation was necessary in that case. The second was one of acute empyema, in which air was introduced alternately with the extraction of fluid. No marked result ensued, and free incision was made later. The third was that referred to by Dr. Powell, in which air was introduced to prevent too rapid effusion in a case where the lung was much diseased. Air was introduced alternately with removal of the fluid until thirty or forty ounces had been withdrawn. It must be remembered that as soon as air is introduced into the pleura it is impossible to withdraw all the fluid unless the trocar be inserted at the lowest point For that reason he had supplemented this method by a plan for washing out the sac at the same time and through the same opening. Air is absorbed somewhat rapidly, and in Dr Powell's case rupture of the lung took place three or four days after the operation, and a fistulous pneumothorax formed. In this case the patient was in a low state, but after the formation of the fistulous pneumothorax an incision was made, and he lived some time after. The cause of failure in aspiration was not pushing the trocar in deeply enough at the first plunge. Mr. Hicks showed his modification of Mr. Parker's apparatus, which combined washing out with fluid and injecting air as well. Cough at the close of the operation was undoubtedly prevented by this method, but it might also be prevented by an elastic bandage round the chest.—The PRESIDENT could not understand how there could be such rigidity of the chest walls in a child as to prevent the outflow of fluid. Moreover, the pressure of the abdominal viscera and the expansion of the other lung would act in expelling the fluid even if the wall itself were rigid. It was assumed that air is absorbed slowly, but surgeons know how rapidly it could be absorbed. Therefore the injection of fluid was equally safe; and some have suggested to replace the pus by oil. The old surgeons used to inject a decoction of barley. If air were injected the fluid could not be got rid of unless the opening were low, and air could be just as well, if not better, admitted by means of a free opening, which does not exert any force on the lung one way or another. Mr. Parker's plan was applicable to cases of rigid chest wall, but he would put the author on his guard against sources of fallacy.—Mr. PARKER, in reply, said he was aware that the method would be open to discussion and objection. The title of the paper was, "Suggestions for the Treatment of Special Cases of Empyema," and he had referred to cases in the paper in which there were other difficulties than rigid chest walls, for the purpose of showing that he was alive to some of these other difficulties. It was clear that the present methods of treating some cases were insufficient; for since the time when Dr. Symes Thompson had allowed him to operate on one of his cases, this new plan had been tried and elaborated at Brompton Hospital. He had suggested that this plan should be tried previous to free incision, in the hope of being able to avoid that necessity, but was well aware that free incision secured excellent results, though in some cases surgeons were quite unable to close the wound, owing to the non-collapse of the empyema cavity. In some cases of serous effusion the fluid recollects rapidly; in such it might be preferable to substitute air for the fluid, and the conditions governing absorption would probably not be the same as in the healthy pleura. In the particular case related he had taken every precaution to avoid fallacy; he was possibly influenced by Bouchut's case referred to, and by the fact that a cavity in which the needle could be freely moved not infrequently remained on the cessation of the flow of fluid. If such were the case, there must be more or less of a vacuum—a condition most favourable to reaccumulation of fluid. Mr. Parker demonstrated his apparatus at the close of the meeting.

MEDICAL SOCIETY OF LONDON.

Acute Hip-joint Disease in an Infant.—New method of Treating Fracture of the Patella.

AT the meeting on the 17th inst., Mr. Francis Mason, President, in the chair,

Mr. ROYES BELL showed a case of Gunshot-wound penetrating the Clavicle and Lung, the ball lodging in the muscles of the spine, having, it was surmised, passed between the subclavian artery and vein.

Mr. EDMUND OWEN read notes of a case of Acute Hip-joint Disease in an infant shown to the meeting (see p. 683).—The PRESIDENT said the points of interest were the use of the spray and the age of the patient operated on.—Mr. BLACK thought that greater benefit might possibly have been obtained by subcutaneous puncture in an earlier stage.—Mr. GANT thought it was better not to attempt antiseptic treatment unless it could be carried out completely. He agreed with the diagnosis, and would open the abscess behind the trochanter rather than in front. He had treated two cases of effusion into the knee-joint (in adults) in a similar manner without antiseptics, following up the puncture by firm pressure.—Mr. BRYANT also concurred in the diagnosis. The good results depended on early opening, the seat of which was indicated by the panting of the abscess. In Mr. Owen's case an antiseptic—iodine—was used, and he objected to the restriction of the term "antiseptic" to the spray system.—Mr. OWEN said there was no pointing of the abscess at the time he operated. The treatment of hip-joint disease was different from that of knee-joint disease, in the fact of its external signs being so much more marked. He insisted upon the necessity of a large free opening.

Mr. LUND, of Manchester, read a paper on a New Method of treating Simple Transverse Fracture of the Patella. On the assumption that the chief, if not the only, cause of non-union in such cases is imperfect apposition of the broken fragments, so that actual contact of the osseous surfaces is not attainable, Mr. Lund has adopted this plan: For the first six or eight days the limb is kept extended on a back splint with foot-piece, and slightly raised; cold evaporating lotion or ice is applied to the knee until nearly all effusion within and external to the joint has subsided. Then, while the patient is under the influence of an anæsthetic, a strong steel pin is drilled through each portion of the patella, from the external to the internal border, a small hole being made in the skin by the entrance and exit of the pin, great care being taken by the mode in which the patellar fragments are pierced that the point of the screw pin does not injure the articular surface of the bone. These screw pins, which should be placed as nearly as possible in parallel lines, are next drawn very closely together until the broken surfaces of the bone are brought into perfect contact by means of a double screw instrument which, for the time, holds them firmly in position; while so placed the ends of the pins are enclosed in a coil of very thin copper wire, so arranged in repeated turns as to gain great strength, and then, when the pins are completely fixed, the double-acting screw instrument is removed, the broken surfaces of the bone remaining in absolute contact. Mr. Lund demonstrated the method very clearly by using the knee-joint from an artificial leg in which the broken patella was represented by two pieces of cork kept apart by elastic bands and covered by a knee-cap to imitate the skin. He gave the particulars of two cases so treated with excellent results, and also a third case now under treatment at the Manchester Infirmary. Contrary to what might have been anticipated, these steel pins do not produce any local or constitutional disturbance, although retained *in situ* in the first case for 37 days and in the second for 43 days, when good (?) osseous union was obtained.—Mr. ADAMS believed that often even ligamentous union failed, and only a periosteal fibrous union took place. A true ligamentous union would not stretch to a greater extent than an inch. He had obtained fairly successful results with Malgaigne's hooks, getting very short ligamentous union; and had never seen any ill results from their use, though such had occurred at King's College Hospital.—Mr. ROYES BELL said the patient alluded to by Mr Adams was a middle-aged woman in broken health. Erysipelas set in about the punctures of Malgaigne's hooks, and suppuration extended into the joint,

causing death. In a case of his where ligamentous union took place, the patella was subsequently fractured in another place, the ligamentous union remaining intact. In a case of double fracture one patella was treated with, and the other without, Malgaigne's hooks. The union obtained by the hooks was better than that without them.—Mr. H. MORRIS ascertained from Mr. Royes Bell that the fracture treated without Malgaigne's hooks was considerably anterior to the other, and he thought that this might account for the superiority of the latter. He asked what kind of union Mr. Lund believed himself to have attained. He believed a close ligamentous union to be superior to an osseous, and pointed out that the method advocated by Mr. Lister had been practised by other surgeons previously with success, and that Mr. Lister did not claim its invention.—Mr. B. SQUIRE thought Mr. Lund's rods would probably promote the formation of callus.—Mr. BRYANT would prefer Mr. Lund's method to that of opening the joint, if either was necessary. Mr. Lister only recommended his plan in apparently desperate cases, and in such rare cases he (Mr. Bryant) would prefer Mr. Lund's method. The ordinary methods, in his experience, had produced very good results, and some of the patients were able to follow the occupation of porters, bargees, &c. He pointed out the risk of injury to the articular surface of the bone in Mr. Lund's operation, and had not a favourable opinion of Malgaigne's hooks.—Mr. LOCKWOOD advocated Mr. Manning's plan, as adopted at St. Bartholomew's Hospital.—Mr. GANT treated fractured patella by semicircular pieces of gutta-percha placed round the limb above and below the patella, and kept in apposition by Malgaigne's hooks, aspirating the joint if much effusion was present. The interval between the fragments on leaving the hospital was about a quarter of an inch, and although it often became increased the utility of the limb was not lessened.—Dr. DOWSE suggested division of the rectus to aid the apposition of the fragments.—The PRESIDENT said he had found the results of the ordinary treatment to be satisfactory. In bad cases he had used a method of bringing the fragments together by pins.—Mr. LUND, in reply, said that Malgaigne's hooks were apt to cause tilting of the fragments. In one case he thought he obtained bony union. Very little irritation was caused by the rods, and no callus was induced. He would only use his method in recent fractures, and not in broken constitutions. He had seen very satisfactory results from section of the rectus muscle. Its advantage over Malgaigne's was that the former brought pressure to bear on hard tissues, and the latter on soft tissues liable to suppurative inflammation.

Reviews and Notices of Books.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Directeur de la Rédaction, Dr. JACCOUD. Tome XXXI. Rei–Rot. pp. 777. Paris: Baillière et Fils. 1882.

THIS volume is almost entirely occupied with the consideration of six subjects: Reins, by M. Labadie-Lagrave; Resections, by M. E. Delorme; Respiration, by M. Mathias Duval; Retina, by M. F. Panas; Revulsion, by M. Raynaud; and Rheumatism, by M. G. Homolle.

Part of the diseases of the kidney have been already considered in another volume of this dictionary under the head of nephritis, but the present article deals with those affections of the kidney that are in relation with surgery, including suppurative inflammations, pyelo-nephritis, hydronephrosis, renal tuberculosis, and caseous nephritis; tumours; parasites; hypertrophy and atrophy; and, lastly, anomalies of formation and position. M. Labadie-Lagrave considers that idiopathic abscesses of the kidney are less serious than those of traumatic origin, and it is well for the patient when traumatic abscesses find an outlet. He quotes the cases of Dowse, Bryant, Ogle, Taylor, and others by various German authorities. A good account is given of hydronephrosis, or cystiform enlargement of the pelvis and calyces of the kidney. In regard to malignant tumours, the author appears to agree with Lancereaux, who considers that most of the cases of cancer of the kidney, or rather those that have been described under that name in young persons, are in reality cases of embryonal fibroma or sarcoma. Hahn not long ago presented to the Gynæcological Society of Berlin a sarcoma of the right kidney of the size of two fists, which was taken from an infant only ten months old. Various instances are given in which the tumour was removed by operation. Primitive cancer of the kidney is certainly rare, and Lebert states that out of 447 cases of cancer occurring in different organs, there were only 12 cases of cancer of the kidney. It is essentially a disease of advanced age.

Several illustrations are given of the principal anomalies of position of the kidney. Cruveilhier attributed dislocation of the kidneys to pressure of the stays in women, and pointed out that it is more likely to occur, and did occur more frequently, on the right than on the left side, the left kidney, owing to its higher position, and to the presence of the cardiac extremity of the stomach and of the spleen, being more capable of sustaining pressure than the right. The statement has been met by the assertion that women of fashion, who push the abuse of the corset to its utmost limits, do not furnish the largest number of cases of dislocation of the kidney; but Bartels, of Kiel, declares that the greater number of cases are met with in country girls, who do not indeed wear stays, but who keep up their petticoats by extremely tight bands round the waist. The line of compression in these women furrows the integument between the second and third lumbar vertebræ, behind, and a little below the umbilicus in front, which is just opposite the middle of the right kidney, and causes it in some instances to slip downwards, and when troublesome nephrectomy can be performed to the great relief of the patient.

The article of M. Delorme, on Resection, bristles with statistics. The mortality from resection of the coxo-femoral articulation in war is uncertain, amounting to 93·4 per cent. of all the cases, 94·73 dying when the operation was primary, 77·78 when secondary, and all dying when intermediate. Resections of the knee are not much more favourable in war. The resections of the shoulder, on the contrary, give much better results, the mortality being only about 23 per cent. M. Delorme gives an excellent *résumé* of the discussion, which must be familiar to all surgeons past middle life, that arose about the year 1840, respecting the importance of preserving the periosteum, a discussion in which Flourens declared that if periosteum were granted to him, he would make bone, though with almost the same breath he maintained the singular paradox that this very periosteum might be destroyed without inconvenience, since it can reproduce itself, and when reproduced can produce bone. As Ollier observed, the object of prolonging and greatly increasing the difficulties of an operation, in order to retain a membrane which can so conveniently be formed, is not clear. Diaphysial resections are treated of under the head of traumatic resection, the cases being chiefly those met with in military surgery; pathological, as in osteo-myelitis; conical stumps, angular callus, resection of the ribs in pleurisy, and resections in rachitis. Articular resections are similarly divided into pathological, including white swelling, juxta-epiphysial osteitis, anaplastic or orthopædic, &c., and traumatic resections. This article exhibits a remarkable amount of patient industry and research on the part of the author, and may be referred to with advantage by every operator.

In the article on Respiration the historical summary is well given, and M. Duval holds with Hermann that the chief action of the intercostals is that of inspiration, whilst in regard to the process of hæmatosis or aeration of the blood, he holds with Arsonval, that the primitive lobule only communicates with the bronchial by an orifice which is narrower than its cavity; consequently, at the moment of inspiration there is a tendency to a vacuum in the dilated lobule, the blood rushes into the vessels of the wall to

fill the space, and its carbonic acid is given off into the rarefied air. In expiration, on the contrary, the air finds some difficulty in escaping from the primitive lobule; it therefore undergoes slight compression, and the oxygen is fixed in the blood. The effects of increased and diminished pressure are considered, and M. Duval considers that Crocé, Spinelli, and Sivel would have yet been alive had they been able, in their last fatal balloon ascent, to use the vessels containing oxygen with which they were supplied, but which seem to have fallen from their cold and paralysed hands. No mention is made of Dr. Marcet's suggestion, that in ascents of lofty mountains, chlorate of potash should be taken internally, as a means of supplying oxygen to the blood.

The section on the Retina is very full and complete. The anatomical features are given by M. Duval in accordance with the statements of H. Müller, Krause, and Salzer, the estimates of the latter observer giving 438,000 fibres in the optic nerve, and 3,360,000 cones in the bacillary layer.

The article on Rheumatism might almost be called a complete treatise upon the subject, and is most elaborately drawn up by M. Homolle. After noticing the opinion held by MM. Robin and Littré, that the term "rheumatism" should be abolished, he observes that the capricious nature of its onset, the variability of the symptoms, and the inconstancy of its mode of evolution, in which there is always a place for the unforeseen, together constitute its most striking characters; and he proceeds to point out that the disease really consists of a series of very distinct pathological states, which, however, are frequently combined or associated together. These are too long to be quoted here, but they are founded on clinical facts, and are, like all French classifications, very clear, logical, and precise. In regard to the difficult subject of the pathogeny of rheumatism, M. Homolle briefly notices the theories of Sydenham, Boerhaave, Cullen, Pinel, Bichat, and Chomel, some of whom regarded it as a pyrexia, whilst others held it to be a phlegmasia. Pfeuffer and Hueter, in more recent times, have attributed the arthropathies to capillary embolisms, and the latter author has even gone so far as to place it under the head of zymotic infectious diseases, believing that the irritating or inflammation-producing particles can penetrate into the blood through the skin when the vessels and sudoriparous glands are dilated. There are yet other views, such as that which attributes rheumatism to a disturbance of the nervous system, and that which admits it to be a definite dyscrasia. Its precise nature and the immediate cause of the symptoms cannot, however, be said to be satisfactorily established. It need only be added that the description of the various forms presented by the disease, and the treatment found by experience to be most serviceable, are very faithfully given. M. Homolle speaks in terms of high praise of salicylic acid and its combinations, and considers that it should be the first remedy prescribed in all cases of articular rheumatism, though it has no effect on visceral complications.

In conclusion, we may observe that to all the articles copious and valuable bibliographies are appended, and that the French writers appear to be much more disposed to examine the works of foreign authors than has hitherto been the case.

On the Morbid Conditions of the Urine dependent upon Derangements of Digestion. By C. H. RALFE, M.D., M.A. London: J. and A. Churchill. 1882.

THE more, in our investigations of disease, we can substitute definite facts for vague assertions, the more certain will be the progress of the medical art. Dr. Ralfe's work is an endeavour, and a most successful one, to enable the practitioner to avail himself to the utmost of those most recent facts of physiological chemistry which have a practical bearing upon clinical investigation. It is a book of principles essentially, and is well calculated to make the thoughtful reader ponder advantageously on those incessant changes and exchanges which are ever in progress in the living human laboratory, and which in sum we call nutrition. In the preface to one of his books old downright William Cobbett says, "As to the manner of studying this book of mine, I would advise the reader to begin by reading it all through *from the beginning to the end*; and not to stop here or there to learn one part of it at a time. ..... This would give him an enlarged general view of the whole matter;" and he then goes on to further insist that the principles should be mastered before details are entered upon. We should advise the reader to pursue the same course with the book which forms the subject of this notice. All the chapters are worth reading, but some knowledge of all of them greatly helps to a full comprehension of any one.

Having dealt with the general subject of the formation and removal of acid from the body, the author proceeds to discuss those forms of dyspepsia which are associated with acid and alkaline conditions of the urine respectively. He then enters upon a discussion of the derangements connected with and the general clinical significance of deposits of uric acid, oxalates, and phosphates.

One of the most interesting chapters is that devoted to uric acid. This body is found in comparatively small quantities, and there are no sufficient grounds for believing that all albuminous matter passes through a stage of uric acid before elimination, or that uric acid represents a station, as it were, on the line which leads physiologically from nitrogenous diet to urea. It is one of the least soluble of organic compounds, and its deposition in the tissues or urine would seem to be due to an inability of those fluids to keep it dissolved, owing to a decreased alkalinity of the first or an increased acidity of the second.

An interesting parallel is drawn between the premonitory symptoms of scurvy and gout. In the former condition the blood may be assumed to be deficient in alkalescence from the want of a vegetable diet, so that the acid is relatively in excess, while in gout the acidity of the blood and urine is due often to a positive increase of acid. Since uric acid may occur in the urine from very different causes, Dr. Ralfe rightly deprecates anything like routine treatment of the cases in which it makes its appearance. In such cases "the urine must be completely and thoroughly examined, not merely with reference to the absence or presence of deposits of uric acid and the urates, but with regard to its quantity, its actual acidity, and the amount of solid matters passed daily." As regards treatment of gouty conditions, Dr. Ralfe steers a wise course between the tonic and ascetic regimens. He recognises that excess of saccharine matters in the food is as harmful as excess of nitrogen; and that, with regard to beverages, free acid and sugar (as in London porter) are more provocative of gout than alcohol. He agrees with Sydenham that teetotalism may be exceedingly injurious by withdrawing stimulation from debilitated subjects whose hearts will not work satisfactorily without it.

The other chapters of this book, equally with the one to which we have referred, are provocative of thought in the reader, and there is no occasion to add that a book which drives the reader to think is thoroughly well worth the reading, and we can unhesitatingly recommend a perusal of this brochure of Dr. Ralfe's on a most important department of medicine.

MR. E. NOBLE SMITH, F.R.C.S. Ed., delivered a lecture on the 22nd inst. at Hampstead on "Modern Dress and Fashionable Deformities." The address was illustrated by diagrams. The extravagances and unhealthiness of many features of modern female costume were eloquently denounced, and a "divided hygienic skirt" was recommended.

THE LANCET.

LONDON: SATURDAY, APRIL 29, 1882.

IN the death of CHARLES DARWIN we have to deplore the loss of one of the greatest minds that this country has produced—of one who, though he had attained a ripe old age, was still in the full maturity of his intellectual powers, and was still engaged in the congenial task of strengthening and completing the edifice, the foundations of which he had himself laid more than half a century ago.

The work he has done, astonishing in its variety and accuracy, is yet more remarkable for the vivifying influence it has exercised on every department of biological science, for the new paths of research it has opened up, and for the admirable model it presents of the method in which science should be pursued. Following, and still improving, on the precepts of the Father of Modern Philosophy, he turned at an early age to experiments as the sure guide to knowledge, and from these, constantly varied and modified, he drew conclusions so cautiously and temperately that they have proved practically unassailable in the midst of the searching criticism to which they have been subjected. That method of inquiry disarms opposition, and there has probably never been any man whose influence has been so great, yet whose personal enemies have been so few. The doctrines he advanced were no doubt at first in some quarters received with surprise and incredulity, and in others with contempt or indignation; but entrenched behind the bulwark of facts, he left it to his adversaries to furnish a better explanation of the facts, or failing that to admit the theory which he put forth. It is not often the fortune of men, however eminent, to find their opinions, and the doctrines they have advanced, crystallise into a system, and, in spite of strenuous opposition, receive general acceptation, and become everywhere recognised by their name. To effect such a result not only is wide knowledge required, but rare powers of exposition, and these high qualifications DARWIN possessed in perfection. The mere quantity of work which with impaired health he was able to accomplish is surprising. Year by year, with occasional interruptions, he brought out a volume, full of novel and interesting facts, containing the records of observations that had often been extended over long periods of time, and of experiments that must have demanded much thought and sagacity in their contrivance, as well as skill in their execution, and patience and accuracy in their registration.

The most important of the works that were published by Mr. DARWIN, and that with which his name will always be associated, is the "Origin of Species by means of Natural Selection." In this the theory of Evolution, often termed Darwinism, is advanced; and the other volumes written by him for the most part contain evidence collected with a view to support or illustrate the doctrines here expressed. Its appearance in 1859 created great excitement; it was read and commented on not only by the scientific, but the public press, and very strong opinions were expressed in regard to it. By men of science it was almost everywhere received with delight. It was known that it was the outcome of long and laborious work, and that every statement had been long and maturely weighed. The tone of the book was good; there was no attempt at fine writing, no haste in arriving at a conclusion; the facts in favour of his views were stated clearly and succinctly, and if any seemed to be opposed to them, these also were specified, and due weight assigned to them with perfect candour. No doubt the way had been prepared for its reception by the appearance of various memoirs and treatises, and especially the anonymously published "Vestiges of Creation," but none of them took root; and the "Origin of Species" owed its success to its intrinsic merits, to its carefully selected details, its judiciously stated and temperate argument, and to its logical conclusions. The reader who followed the reasoning closely felt himself irresistibly borne along till he was astonished, as he closed the book, to find that he had become a Darwinian; he had unconsciously cast off the old views and doctrines, and had become a convert to the new, which he could not but feel opened out a higher, better, and more rational explanation of the mode of origin of the living world around him. The fundamental doctrine held by Mr. DARWIN in that work in regard to the origin of species was that animals or plants are not immutable, but are liable to change, and that if such changes afforded any advantage, it would aid in their preservation in that struggle for existence which is constantly in operation. New features, new forms, new organs would thus arise by natural selection, not suddenly, but by gradual modification of the old, every such peculiarity tending to perpetuate itself by inheritance. Thus the species at present existing represent the survival of the fittest, for they hold their place in virtue of their ancestors having slowly undergone and transmitted by inheritance favouring changes adapting them more and more perfectly for the special conditions under which they live, and enabling them to resist the destructive agencies by which their extinction is constantly threatened. The doctrine of evolution, as thus propounded, was shown to afford an explanation of a multitude of facts that were otherwise unintelligible.

In the "Variations of Plants and Animals under Domestication," and his "Descent of Man," Mr. DARWIN applied the theory of evolution to the human race, and showed how it was possible that man himself might be only the gradually perfected form of some originally ape-like ancestor—a view that is even yet in some quarters regarded with horror and repugnance. His treatise on the "Formation of Mould" has too recently been noticed in these columns to need comment, except to express regret that it should be his last work.

Yet let us not, in conclusion, regard his loss as irreparable. He has left behind him sons who have already shown that they appreciate, as well as inherit, their father's genius—sons who have been able to share his labours; who have assisted him in many of his researches, and who, we doubt not, can carry on some at least of the investigations he commenced. It was, we are sure, with a feeling of pleasure and gratification that every man of science in this country read that the liberal-minded Dean of Westminster

determined that the remains of CHARLES DARWIN should be buried in the Abbey. He well deserves that high honour, and the large concourse of eminent men who attended him to his last resting place testified to the estimation, love, and reverence in which he was held by his contemporaries.

WE described last week the chief facts of KOCH'S remarkable discovery of the bacilli of tubercle. The extreme importance of the subject, however, gives much interest to the details of the researches, of which a full account has appeared in the *Berlin. Klin. Wochenschrift.*

The material for the investigation was derived, as we mentioned, from both man and animals. That from the former source consisted of the organs from eleven cases of miliary tuberculosis and twelve cases of the so-called "scrofulous pneumonia." In the cases of miliary tuberculosis the organisms were invariably found in the lungs; but in old granulations in which the centre could no longer be tinted in the ordinary way, the bacilli could not be discovered except in small groups at the edge of the tubercle; and they were found in larger quantities in younger tubercles, although not where caseation had commenced. They were observed also in the miliary tubercle in the spleen, and very abundantly in the grey granulations of the pia mater, in a case of tubercular meningitis. In many caseous bronchial glands dense swarms of bacilli were present, some of which contained spores. Tubercles embedded in the gland tissue often presented a giant cell in the centre, and around this epithelioid cells; the bacilli were in the middle of the giant cell. Twelve cases of caseous broncho-pneumonia were examined, and in most of them the bacilli were found, especially in the cavities. The familiar small caseous fragments within the cavities consisted almost entirely of bacilli. In the larger cavities they were mixed with other bacteria, from which, however, they were readily distinguished, since the non-tubercular organisms acquire a brown colour in the method of tinting which we described last week.

The bacilli can be demonstrated very readily in the tubercles which surround intestinal ulcers, and are most abundant in the younger and smallest nodules. They were found also within giant cells in a case of solitary tubercle of the brain, in two recently extirpated scrofulous glands, and in two cases of fungous inflammation of joints.

The material from animals came from ten cases of bovine tuberculosis ("Perlsucht"), with old calcified nodules in the lungs, sometimes in the peritoneum, and once in the pericardium. Bacilli were present in all the cases and chiefly within the giant cells, which were present in the tissue surrounding the calcified nodule. The distribution of the organisms was for the most part remarkably uniform, so that, of a number of giant cells, hardly one could be observed which did not contain a number of bacilli, about twenty on an average. A large number of the bacilli were also found in the organs of a hen which had died of tuberculosis; they were present in the tubercular nodules of the bone marrow, and also in the larger nodules of the intestinal tract, the liver, and the lung. In three monkeys which had died of spontaneous tuberculosis, large numbers of the organisms were found in or adjacent to the innumerable nodules with which the lungs, liver, spleen, mesentery, and the caseous lymphatic glands were crammed.

Besides these cases of spontaneous disease, a considerable number of animals were examined which were infected by inoculation with various tubercular substances: grey and cheesy tubercle from human lung, sputum of phthisical patients, tubercular material from consumptive monkeys guinea-pigs and rabbits, from the calcified and caseous lung-tissue of cattle infected with bovine tuberculosis, and also by the subsequent infection with the products of preceding inoculation. The number of animals thus inoculated and examined amounted to 172 guinea-pigs, 32 rabbits, and 5 cats. The search for the bacilli was limited in most cases to the affected portions of the lungs. In not a single case were the bacilli absent; in many they were very numerous, and contained spores, but in some preparations they were few in number, although characteristic in appearance.

After reciting the results of the culture experiments of which we gave an account last week, KOCH points out that the subjects of experiment into which the cultivated bacilli were introduced in different manners, by inoculation in the subcutaneous tissue, injection in the peritoneal cavity, the anterior chamber of the eye, or directly into the circulating blood, were rendered tubercular without a single exception, but the number of tubercles developed was proportioned to the quantity of germs which were injected and had been artificially cultivated. In some animals ubercular iritis was produced by the injection of an extremely small quantity of material into the anterior chamber. The possibility of the results which followed the inoculation of the cultivated germs being in reality a spontaneous tuberculosis, or the consequence of an unnoticed accidental inoculation of uncultivated tubercular material, is negatived by the following considerations. From neither cause would so abundant a development of tubercle have occurred in so short a time. Uninoculated animals were kept for comparison in the same place and under the same conditions, and in no instance did they become tuberculous. Many guinea-pigs and rabbits were also inoculated with other substances in the same way, and in no instance did they present the typical characters of miliary tuberculosis, which only arises when the system is, so to speak, shattered by the inoculation of an enormous quantity of infective germs. All these considerations taken together justify the assertion that the bacilli occurring in the tubercular material are not only the accompaniment of the tubercular process, but are its cause, and that the bacilli constitute the tubercular virus.

The parasitic nature of tuberculosis being thus established, the next question is that of its etiology. Whence do the organisms come and how do they get into the body? In the first is involved the important problem of whether the infective material develops only under the conditions which it finds in the animal body, or whether, like the bacilli of anthrax, it can pass through its process of development independent of the animal organism. A series of experiments, to ascertain the temperature at which the tubercle bacilli develop, showed clearly that they grow only in a narrow range of temperature, between 30° and 41° C. Below 30° and above 42° not the least growth had taken place in the course of three weeks; while, on the other hand, the

bacilli of anthrax develop readily at as low a temperature as 20°, and also between 42° and 43° C. This fact seems to decide the first of these questions. In temperate climates 30° C. is never maintained for two weeks; hence the organisms appear to be true parasites, and incapable of developing outside the body.

An answer to the second question is also possible. Most cases of tuberculosis commence in the respiratory tracts, and the infective material first develops in the lungs and bronchial glands. Hence it is probable that the germs enter the system by the inspired air, adhering perhaps to the particles of dust which are carried along with it. How they get into the air may be conjectured from the enormous quantity of organisms which are found within phthisical cavities, and which must be expectorated in the sputum. KOCH has indeed examined the sputum in a large number of cases of phthisis, and in about half the specimens examined he found bacilli, in most cases very numerous and containing spores. The sputum of patients not suffering from phthisis gave purely negative results. Animals inoculated with fresh sputum containing bacilli were rendered tubercular with as much certainty as if they were inoculated with miliary tubercle. The virulence of the sputum was, however, in no degree lost by drying. Guinea-pigs were as readily rendered tubercular by sputum which had been dried for eight weeks as by the inoculation of fresh sputum. Hence it may be assumed that sputum dried on the floor, clothes, &c., retains its virulence for a long time, and, inhaled as dust, may set up the disease. It is conceivable that the maintenance of virulence depends on the presence of spores in the bacilli, but the formation of spores clearly goes on in the animal body, and not, as in the case of the anthrax bacillus, outside it.

KOCH hesitates to follow into the region of hypothesis the considerations which are suggested by the hereditary tendency which manifestly plays so important a part in the causation of tubercular disease, but he points out, in this relation, that the growth of the tubercle bacilli is slow. This makes it highly probable that the tubercle bacilli cannot, by their successive development, infect the whole body from a small wound, as do the organisms of anthrax. To render an animal tubercular with certainty the infectious material must be inserted in the subcutaneous tissue, in the peritoneal cavity, in the anterior chamber of the eye—i.e., in a locality in which the bacilli may gain a firm footing for their development. Infection from the surface of a wound, or from the cornea, is very exceptional. The bacilli are eliminated before they can get into the system. This consideration is adduced as the reason why persons are not rendered tubercular by making post-mortem examinations on the bodies of those who have died from phthisis, even when the tubercular material comes in contact with small incised wounds on the hands. Similar considerations apply to the problem of infection by the lungs. It is probable that the bacilli do not get into the system, even when inhaled, unless they can develop in stagnant secretion, or unless the loss of epithelium facilitates their ingress. Otherwise it is difficult to understand the low degree of infectiveness of phthisis.

These admirable researches of KOCH, and the important facts he has discovered, can scarcely fail, however, to bring to the reader's mind the paramount distinction which must always be drawn between the value of the facts ascertained by experiment and that of the more or less hypothetical application of those facts to the far more complex problems of disease. The doctrine to which KOCH appears to incline, that every case of phthisis is the result of a distinct extraneous infection, is difficult to reconcile with the potent influence of heredity, and with the occurrence of phthisis in apparently absolute disconnexion with previous cases, especially when we consider the rarity with which even probable infection occurs under the most favourable conditions for it. These and many other similar facts suggest the caution that is necessary in drawing conclusions regarding the part played by the germs in the propagation of the disease. They suggest that the aptitude or inaptitude of the soil may be as specific and as important as the organism which grows in it. These experiments are certain to be prolific of a vast increase in our knowledge, and, let us hope, in our power also, and the numerous questions they suggest will, doubtless, soon engage the attention of experimental inquirers.

THE plea of insanity ought to be called the plea of irresponsibility, so completely is the idea of disease being subordinated to the hypothesis of unaccountability. It cannot be doubted that public safety and—in a very grave and practical sense—public morals, also, are endangered by the humanitarian spirit of the time, to which a materialistic philosophy lends especial force, and which tends to regard man as a mere instrument in the hands of his physical destiny—a machine wound up and set to work out a particular class of actions, and to obey a certain series of impulses—and which strives to find or construct excuses for his wrong-doing accordingly. We are all dissatisfied with the formulæ of deduction drawn up by the judges for the MACNAUGHTEN case, and rightly so. We are certainly persuaded that a man may know that what he is doing is wrong, and yet be unable to resist the impulse to do it. This, however, supplies no sufficient reason or justification for the attempt to strain and stretch the theory of irresponsibility until it can be made to cover the crimes of half the ill-nurtured and ungoverned minds that discredit human nature.

We regard the growing tendency to employ the plea of insanity as a means of saving condemned criminals from the gallows as a social evil, and a prostitution of science to humanitarian purposes. We are strongly of opinion that the profession should resist this tendency, and refuse to allow medical testimony to be accumulated by the legal representatives of persons in difficulty as "evidence to character" used to be obtained to mitigate the severity of sentences, or as "*alibis*" were set up and supported in cases which admitted of no defence except the plea of "mistaken identity." It is a humiliating, and so far as the future repute of the profession may be affected, a disquieting, fact, that in almost every recent case of murder, some medical person has come forward with a suggestion that the prisoner is "insane." This sort of thing should be left to the sensational novelists, and the dabblers in science, who have no special responsibility in the matter, and whose action will not bring discredit on a profession which at this crisis in its social history has peculiar need to show unwonted self-restraint, and disprove the allegations of flippancy and hot-

headedness to which it has been exposed by the prevalence of crazes and fashions in medicine and practice.

We feel very strongly on this point, and as the opportunity offers, we cannot scruple to express our opinion. So far as the editorial columns of THE LANCET are concerned, it must be understood that, short of a firm belief on scientific grounds that a person charged with, or convicted of, murder, was actually insane at the time of the commission of the deed, nothing shall induce us to raise or countenance "the plea of insanity." Meanwhile we yield to none in the extent, or the intensity, of our sympathy with the terrible fate of a fellow-creature standing on the verge of an ignominious grave; and we long for the day when the clumsy and, in one sense, cowardly, expedient of killing those who have killed others shall be no longer tolerated by society. The hanging clauses of our penal law are a disgrace to the Statute Book, and we shall be heartily glad to see them expunged; but while they remain in force it is not right that they should be evaded, or that perpetual attempts should be made to evade them by recourse to the subterfuge of suggesting that the murderer *may* have been insane. This is practically what the plea of insanity has come to mean. We have "advanced" beyond the sober standpoint at which it was deemed necessary to show that he actually *was* insane!

In the case of MACLEAN, happily, there could be no question. This man had been in an asylum, and there was abundant and conclusive evidence to show that he was a dangerous victim of homicidal—or, as Dr. SHEPPARD very properly put it, *delusional*—mania. The only reflection it is worth while to make from the medical standpoint, in reference to this case, is that it affords illustrative proof of the great need which exists for intermediate houses, such as Sir WILLIAM ELLIS suggested, between the asylum and the world, to which "cured," but probably relapsing, patients might be moved, and where due liberty would be accorded them, including the opportunity of self-support, without absolutely letting them loose on society to work out their evil machinations when these shall return upon them and they are again, in a legal sense, insane. For the rest, we may continue to rejoice that no one who is not insane has yet dared to soil the loyalty of the English nation with the stain of a criminal attempt on the life of the illustrious Lady who now wears the crown.

In the case of LAMSON we utterly fail to perceive a particle of evidence which demonstrates his insanity. The plea set up in his behalf has been wholly one of presumption or conjecture that he *may* have been insane. It is not to be denied that a systematic abuse of "poisoned-sleep" producers may so deteriorate the brain as to render the mind weak, and place the judgment at the mercy of the lower greeds and impulses; but this is nothing more than admitting that a man may so impair his intellectual powers by drugs or debauchery as to become mentally feeble. Surely we are not, as a State or community, about to commit the absurdity of allowing self-made stupidity and excitability to be accepted as an excuse for crime which has for its object to benefit the criminal or to wreak his vengeance? This would be an act of inconceivable folly. If such a policy were carried into effect, we might as well repeal all the statutes enacted against crime! Nothing would be easier than for any evilly disposed person to protect himself against all possible charges of murder and theft by simply debauching, or pretending to debauch and weaken, his intellect. Justice has decreed that the drunkard shall not stand excused, and the same rule must apply to intoxications or debaucheries with morphia, chloral, bromide of potassium, and the like. Unhappily the name of such self-destroyers is legion. We had no wish to write thus before the case of LAMSON had been decided, but now that the fate of that man does not tremble in the balance, we feel it a duty to protest against what we conceive to be a fatuous policy.

THE meeting in support of the Metropolitan Provident Medical Association, if not of the Metropolitan Provident Dispensaries Company, Limited, at the Mansion House, on Wednesday, under the auspices of the Lord Mayor, was large enough to show the interest which is felt in the extension of provident principles, in medical matters, among the working classes. The speeches made did not add very much to the argument of the case, or to the information of the public. That the working classes do not sufficiently realise the advantages of making systematic provision for good medical attendance on themselves and on their families, is a mere truism which did not require a meeting at the Mansion House to show. We have a great regard for the influence of the Mansion House and of Lord Mayors. And when so many urgent claims for its exercise exist on every hand, we think it only reasonable to be careful in making demands. The question therefore is, whether a case was made out on Wednesday to urge the Lord Mayor to move the charitable public of London to make a special effort on behalf of Provident Dispensaries, or rather—which is a very different thing—of the Metropolitan Provident Medical Association. We scarcely think so. There were two points in the speeches of almost every speaker: one was the abuse of the out-patient department of hospitals, the other was the importance of catering for and working through the Friendly Societies. Mr. STANSFELD, the chairman of the Metropolitan Provident Medical Association, the principal speaker, made out strongly that unless dispensaries could be planted in every district of London, so as to meet the wants of members of Friendly Societies all over the metropolis, the thing would not be taken up by the Friendly Societies, and therefore would not be a success. This representation entirely justifies our complaint that the Association is bringing coals to Newcastle, and is troubling itself about what Mr. STANSFELD properly calls the "*very élite*" of the working classes. In doing so the Association is guilty of a work of supererogation. The *élite* of the working classes are in Friendly Societies already, and as such have a doctor of their own choosing. Large numbers of them, under club arrangements, have made medical provision for their wives and children. If there is still much more to be done for the wives and children, as we admit, the *élite* of the working classes are highly capable of doing it. The *élite* of the working classes and the medical profession are already on good terms. Medical men are not exacting in their terms, but accommodate their charges to the means of their patients. The interference of an Association between them is therefore uncalled for. And when we are told the way in which the money of the charitable is to be

used—in distributing bills among the general public, to all and sundry, and especially to the *élite* of the working classes, offering medical attendance on the very lowest terms, without any conditions as to wages—we cannot but feel that the Lord Mayor is being used for purposes which are not charitable, and which are not likely in the long run to improve the relations between the working classes and the medical profession. Mr. MOCATTA and other speakers kindly alluded to the amount of gratuitous work done by the medical profession, and the inadequate remuneration which awaits its members after years of toil and waiting. It is too true. But the reverence for medical services is not likely to be increased by practically offering them to all comers on lower terms than are usual in the Friendly Societies.

It is very clear that the commercial aspect of this undertaking does not commend itself to capitalists. We do not wonder at this. The promoters have abandoned the hope of getting the money requisite to build and establish fifty dispensaries in a commercial way, and they appeal, as an alternative, and somewhat inconsistently, with the severe self-supporting principles of Sir CHARLES TREVELYAN and others, for gifts of money. We cannot say that, as put before the public, the scheme is one that we can commend, either on charitable or commercial principles. It is greatly to be regretted that provident dispensaries cannot be supported without so much disparagement of hospitals and so much exaggeration of the abuse of them. It is undeniable that the out-patient department admits of much improvement; but it remains true that hospitals are still the most worthy and admirable of our charitable institutions.

THE proposal to convert the Liverpool Ladies' Charity and Lying in Hospital into a special hospital for the diseases of women involves considerations of some moment, and should not be carried out without a careful examination of the value of lying-in hospitals and of special hospitals for women, as well as of the plan proposed for the relief of lying-in women in case the conversion of the Lying-in Hospital into a special hospital become an accomplished fact. If the arguments which have been adduced in favour of the change be such as to convince those best acquainted with the working of lying-in hospitals, out-door maternities, and special hospitals for women, that lying-in hospitals are pest-houses, and special hospitals for women an unmixed or even a great good, the doors of all lying-in hospitals should at once be closed. On the other hand, if it be true that lying-in hospitals may be, and have been, managed in such a manner as to show a mortality little if at all greater than that met with in private practice they should not be abolished, and the lying-in hospital should be preserved for the benefit of the poor of Liverpool. The first question to be answered, and that which forms the basis of all reasoning on the proposal for consideration, is, What is the ordinary death-rate in childbed throughout the country? The statistics of the out-door maternities attached to our hospitals do not help us to answer this question: they are absolutely worthless and entirely misleading; the sources of fallacy are so numerous, so great, and so well known, that they have been altogether discarded by trustworthy statisticians. Researches have been made with the greatest care by the late Dr. M'CLINTOCK and by Dr. MATTHEWS DUNCAN, with a view to determine the ordinary mortality in childbed. Both observers came to similar conclusions and by different routes: Dr. M'CLINTOCK by examining the statistics of large private practices, and Dr. DUNCAN by an examination of the register of deaths. Dr. M'CLINTOCK showed the death-rate to be 1 in 123, and Dr. DUNCAN states that it cannot be less than 1 in 120. These results have not been shown to be fallacious, and indeed they are now accepted as well-established facts. In face of this it is but trifling with the subscribers to speak of a mortality of 1 in 610, or even of 1 in 225, among those delivered at their own homes. To do justice to lying-in hospitals, however, the mortality in them should be compared, not with the ordinary mortality in childbed throughout the country, but with that met with in the class from which lying-in hospitals are supplied with patients. But it is difficult to obtain trustworthy data for such comparison. The nearest approximation to the actual childbed mortality among the poor is that met with in large towns. DUNCAN found this in Edinburgh and Glasgow to be 1 in 107. LUSK found the childbed mortality outside hospitals in New York to be 1 in 94. TARNIER found it in the twelfth arrondissement, a poor district of Paris, to be 1 in 322; but this was soon shown to be inaccurate by DANYAU, who found in the same district in the early part of 1854 a mortality of 1 in 60 from puerperal fever alone. If to DANYAU'S results be added the proportion calculated by M'CLINTOCK for deaths during childbed from other causes than metria, we obtain a mortality of 1 in 45. Now, what is the mortality in lying-in hospitals? In some it is very high—there may be every degree of badness; in others it is little, if at all, above the ordinary mortality in childbed. If the reports of the Rotunda Hospital, the largest and oldest lying-in hospital in the kingdom, be examined, it will be found that the mortality in that institution is about the same as that estimated for private practice. In this hospital during the seven years of the mastership of COLLINS, 16,414 women were delivered, of whom 164 died, or 1 in 100. During the three years of M'CLINTOCK and HARDY'S mastership 6634 women were delivered, and 65 died, or 1 in 102. In SINCLAIR and JOHNSTON'S time 13,748 women were delivered, and 163 died, or 1 in 84. Moreover, the results obtained in several of the Continental and American hospitals are not less favourable. In Breslau, SPIEGELBERG had only 2 deaths in 901 deliveries. In the enormous hospital in Vienna, BRAUN reports 825 deaths in 61,049 deliveries; in the Hôpital Cochin from 1873 to 1877, the total mortality was 1 in 108. In New York, in the Lying-in Asylum, during twenty-one years the mortality was 1·1 in 100; in the Infant Asylum, during five years, 1·2 in 100; in the Infirmary for Women and Children, during fourteen years, 1·2 in 100. In Philadelphia, in the Preston Retreat, GOODELL lost 6 out of 756, 2 of whom only died from septic disease. Surely these facts are sufficient to show the most infatuated opponent of lying-in hospitals that such institutions may be, and that many of them are, conducted with a mortality little, if at all, greater than that ordinarily occurring in childbed. Further, in Copenhagen an observation was made by STADTFELT, which has an immediate bearing on the mode of giving relief to women about to be delivered, proposed by the advocates of the abolition of the Liverpool Lying-in Hospital. The Lying-in Hospital

in Copenhagen is closed for six or eight weeks in the summer, and during this time women are relieved by gifts of money to provide for their confinement at their own homes. They are attended by midwives who are not connected with the hospital, and yet STADTFELT found the mortality among them greater than that in the hospital (1 in 87). It is proposed to do always in Liverpool what is done during the closure of the hospital at Copenhagen, and what the result is likely to be may be inferred from the experience of STADTFELT. To convert the institution into a special hospital for diseases of women makes the matter still worse. There are departments for diseases of women now in all general hospitals, and there is no call for special hospitals for such disorders. Moreover, the work done in special hospitals for women in England is, in so far as it is known, hardly encouraging to their further development. The work begun and carried on by CHARLES CLAY and FREDERICK BIRD outside special hospitals was, it is true, continued and perfected by Mr. SPENCER WELLS. With this sole exception, we know of no argument for the proposed conversion, unless it be the unenviable notoriety which some of the special hospitals already existing have acquired. Special institutions, as a rule, tend to encourage a narrow form of specialism, and of all specialism there is no one more mischievous than a narrow specialism in gynæcology. Special hospitals for women have by results not justified their establishment, and we heartily approve the resolution of the subscribers to the Ladies' Charity and Lying-in Hospital not to turn their hospital into a special institution for the diseases of women.

WE should have thought the advocates of the present prison system would have been wise to have allowed the recent occurrence at Chester Castle to have passed without further comment. But as they have not done so, we are obliged to answer the objections raised by them to our observations on the matter. This we can best do by a plain narration of the facts. They are as follows:—On the 29th ult. the county coroner opened an investigation into the circumstances relating to the death of JAMES FRY, late a prisoner in Chester Castle, who had just completed a month's imprisonment. Deceased was so weak at the expiration of his sentence that the relieving officer was requested to remove him to the workhouse, where he died a few minutes after admission. The evidence went to show that deceased was weak and ailing when first taken to the prison, and the medical officer stated that he found him suffering from angina pectoris and mitral disease. On this account he was excused hard labour, but was kept in the ordinary prison cell, and for the first week received the diet of the first class, which consisted daily of eight ounces of bread for breakfast, three ounces of oatmeal and three ounces of Indian meal made into a stirabout with water (not milk) for dinner, and eight ounces of bread for supper. During the remainder of the time he received for breakfast six ounces of bread and one pint of gruel, and the same for supper; twice a week for dinner six ounces of bread and eight ounces of suet pudding; twice a week six ounces of bread and eight ounces of potatoes; and on three days half a pint of soup made with four ounces of shin of beef. (We have been taken to task for saying shin bone, but we quote the evidence: "Juryman—Did you say shins? Warder—Yes, shin bones.") Ten days before the patient's discharge he was admitted to the infirmary, but the same diet was continued, without the addition of any extras. The jury found that the deceased died from natural causes, accelerated by the want of a more nutritious and generous diet. It is upon this question of diet that the matter entirely turns. It can hardly be maintained that either of the two dietaries was suitable to a weak and feeble man suffering from attacks of angina associated with mitral disease. At the time the new diet-tables were issued we protested against the employment of diets of the first and second class as being too severe, and as being constructed on principles opposed to physiological experience. A glance at the composition of the two diets will show their extraordinary deficiency in fatty matter. The first contains only the traces, which are present naturally in the bread and meal; the second has a small, but far from sufficient, quantity of added fat, in the shape of suet pudding, twice weekly. Now, it has been shown experimentally that the deprivation of fat is not well borne, even if starches are given freely, and Dr. PARKES has observed that the fact of the great improvement that occurs by giving fat in many diseases of obscure mal-nutrition proves that the ill effect of the *partial* deprivation of fat is both more common and more serious than is supposed. "It has not," he says, "yet been shown that men can live in good health on albuminates, carbohydrates, salts, water, &c., without fat." The constructors, however, of the present prison dietaries have reduced the amount of fatty food, as far as the two classes of diet under consideration are concerned, far below the limits required for healthy nutrition. The result of this experiment is shown in the increased number of coroners' inquests that have been required on persons just liberated from very short sentences—prisoners, in fact, who come entirely under the operation of this scale of diet, and also by the fact recently pointed out by the Secretary of the Howard Association, that these prisoners often leave gaol so weakened as to be unfitted for resuming or obtaining honest labour. As matters at present stand, the medical officer has the responsibility fixed on him either of continuing the ordinary prison diet and relieving a feeble and weak prisoner from hard labour and substituting for it some easier task, such as oakum-picking &c., or of adding extra diet. As many of the inmates of our prisons are in broken health, enfeebled by vice and privation, if the latter course were generally pursued, the extras would soon mount up and defeat the object for which the new dietaries were framed. The present difficulty and responsibility would be greatly diminished if the first and second class diets were improved, either by the direct addition to them of fat of some kind or other, or by substituting a fatty article of diet for some of the starchy elements. So long, however, as these two dietaries are maintained in their present form, so long will prison scandals occasionally result from their effects on weak or enfeebled constitutions. Lastly, with regard to the general routine of the prison system, we believe the working of our local prisons will never be entirely satisfactory till full medical returns are published in the Commissioners' Annual Report. We want a little less official interference at the hands of prison inspectors and a little

more responsibility and freedom of action conferred on the prison officers. As we have already stated, the medical information in these reports is reduced to the smallest possible compass, and is utterly valueless for the purpose for which it is wanted, of really getting an insight into the practical working of our prison system. Surely tables showing the relation subsisting between increase and loss of weight on the different dietaries and with various forms of labour, and information respecting the health of the prisoners, are as much called for as long statistics relative to brush- and mat-making. The plan of publishing the medical reports in full has been adopted by the directors of convict prisons, and an admirable series of reports they are, reflecting the highest credit on the service. We see no reason why the medical officers of our local prisons should not be honoured with a similar trust. Certainly the public could accept more readily the Commissioners' general statements and assertions if they were based upon manifest and tangible facts.

Annotations.

"Ne quid nimis."

THE ELECTION OF FELLOWS AT THE ROYAL COLLEGE OF PHYSICIANS.

THE list of Members who have been nominated by the Council for election as Fellows of the Royal College of Physicians for the present year is of unusually scant proportions. Two features characterise it: the considerable predominance of gentlemen practising in provincial towns who are thought worthy of the distinction, and the almost entire absence of members of junior standing connected with London medical schools. With respect to the former, we entirely agree with the action of the Council, for we have long felt and have from time to time expressed the opinion, that the claims of provincial members for this distinction have been often overlooked or unduly delayed. We are, however, at a loss to explain the extraordinary deficiency this year in the number of junior members recommended for the honour. Taking the average of the last twelve years, we find that it has been usual to elect at least four gentlemen annually whose standing as Members is less than seven years. On the present occasion, if we except Dr. Matthews Duncan, whose election at the earliest legal period was a matter of course, only one member of less than seven years' standing has received the honour. Since the Council has determined to make this special distinction, it only remains for us to say that they could not have made a better selection; but we cannot at the same time avoid expressing the opinion that the fact of only one gentleman representing what has always been considered the very best of the rising professional talent has this year been thought worthy of receiving the distinction implied by election to the Fellowship at an early period of his career, is ominous to the interests of the College and the profession. Members become legally qualified for the Fellowship on the completion of four years from the time of admission; it therefore seems strange to us that, taking the seven years from 1872 to 1878 inclusive, the Council should only have found one member worthy of the honour of promotion. Three reasons occur to us as explaining the deficiency. Either the junior members have deteriorated within the last few years, a supposition which in the face of the activity and good work done by many of them at the Societies we can hardly admit; or, secondly, it is possible that some hesitate before paying a considerable price both in money and in independence for a distinction which some persons are beginning to think is of little practical value; or, lastly, it is possible that some just claims have been overlooked. This is more than possible, considering the mode of election.

THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

DR. J. COSSAR EWART, of Aberdeen, has been elected to this chair, and we may congratulate the University of Edinburgh on the selection of a thoroughly competent comparative anatomist and a good teacher. The circumstances attending Professor Ray Lankester's acceptance and resignation of the appointment have been made public, and must cause much regret to the scientific workers in this country. We cannot understand how Professor Lankester could have been misled as to the duties of the chair, and the means for its efficient working. The possibility that Comparative Anatomy might be struck out of the medical curriculum and the emoluments of the chair seriously affected thereby, must surely have been present in Professor Lankester's mind when he accepted the office. It is clear that strictly scientific chairs, especially botany and comparative anatomy, stand on a precarious footing if any alterations be effected in medical education. We should be very sorry to see any such changes, for we lay great stress on the advantages of a scientific training for every medical student and practitioner; but no one can be blind to the fact that amongst the so-called reforms in the medical curriculum, the abolition of courses of lectures in these subjects is most strenuously urged by a very numerous and influential body of teachers. The difficulty of a laboratory would surely have been arranged if Professor Lankester had begun his teaching and shown its necessity for practical zoological work, and his refusal to present himself for induction seems to us a little ungracious when Professor Huxley asserts in a letter to the *Scotsman* that "the reasons for making the appointment subject to conditions which may be hereafter imposed by an Executive Commission were most fully and carefully explained to Mr. Lankester by myself in Lord Rosebery's presence," before he wrote his letter of acceptance. Difficulties and deficiencies of some sort must surround every such professorship, and grieve an ardent teacher. These should, however, have been duly weighed before accepting such an appointment, as otherwise the teaching of the University might have been seriously hindered, and a slur, unintentional though it may be, is necessarily thrown on the chair, which in this case is probably the most valuable, and might easily be made the most useful, of its kind in Europe.

BRIGHTON MORTALITY STATISTICS.

THE unfavourable mortality statistics which Brighton has during the past six months furnished to the Registrar-General's reports may well arouse feelings of dissatisfaction, if not alarm, among those interested in the welfare of this favourite health and holiday resort. A distinct outbreak of enteric fever last autumn was followed, during the first three months of this year, by the epidemic prevalence of measles, scarlet fever, and whooping-cough. A summary of the statistics published by the Registrar-General in his weekly returns for the first quarter of this year, shows that, whereas the average annual death-rate, from all causes, in the twenty-eight large English towns did not exceed 24·7 per 1000, it was equal to 29·2 in Brighton, exceeding the rate in any of those towns except Preston, where the rate was 29·7. If we look to the evidence of zymotic fatality the evil pre-eminence of Brighton is still more strongly marked. The average annual death-rate, during these three months,

from the principal zymotic diseases in the twenty-eight English towns was 3·76 per 1000, and ranged from 1·34 and 1·64 in Halifax and Sheffield, to 7·13 in Blackburn and 8·17 in Brighton. Thus zymotic disease was considerably more fatal in Brighton last quarter than in any of the other twenty-seven large towns included in the Registrar-General's weekly list; the fatality of measles was nearly four times, of scarlet fever more than three times, and that of whooping-cough twice, as great as the average fatality in the twenty-eight towns. On the other hand, it is some slight set-off to find that the death-rate from enteric fever had again fallen considerably below the average. The days are now past when the verdict in cases of zymotic fatality was "Visitation of God"; and in the face of such figures as the above, and with full knowledge of the serious drawbacks which exist to the satisfactory sanitary condition of Brighton, we can only hope, with all the true friends of that town's best interests, that the local sanitary authority will accept timely warning. Energetic action is necessary, if the sanitary reputation of Brighton is not to be disastrously impaired.

THE INFLUENCE OF THE NERVOUS SYSTEM ON THE LYMPHATICS.

MM. PAUL BERT and LAFFONT, in a note communicated to the Académie des Sciences, point out that the lymphatic vessels behave, in the presence of physical excitants, exactly as do the bloodvessels. All are agreed in referring the dilatation and contraction of the latter to the influence of the nervous system, but no one has hitherto endeavoured to ascertain whether the lymphatic vessels are under the same influence. The authors have, therefore, made experiments in order to ascertain whether this is the case. The abdomen of an animal during the process of digestion was opened under tepid water, so as to avoid the influence of the air and cold on the abdominal lymphatics. The mesenteric nerves were then stimulated electrically, and on this the lymphatic vessels were observed gradually to shrink and disappear. In another animal the splanchnic nerves were similarly stimulated by a voltaic current so feeble that when applied to the tongue it could scarcely be perceived, and the same vessels were then seen to swell and to become turgescent. If the pneumogastric nerves were divided and the peripheral extremities stimulated, besides the peristaltic movement of the first part of the intestine, there was observed first a transient dilatation, and then a considerable and permanent dilatation of the lymphatic vessels. It seemed important to ascertain whether the same effects could be produced in curarised animals. Claude Bernard showed that the pulsation of the lymphatic hearts of the frog ceases under the influence of curara at the same time as the function of the motor nerves of the muscles is suspended. Experiment shows that the same effect is not produced on the lymphatic vessels. Under normal conditions, when the mesenteric nerves are stimulated the lymphatic vessels contract; but under the influence of curara, stimulation of the mesenteric nerves or of the splanchnic nerves causes dilatation of these vessels. It is, however, necessary to ask whether the change in the size of the lymphatic vessels may not be a secondary effect of the action of the nerves stimulated, upon the blood-pressure in the intestinal vessels. To this an answer is supplied by further experiments, which show that the changes in the lymphatics are entirely independent of the condition of the bloodvessels. The section of the mesenteric nerves which causes turgescence of the bloodvessels does not interfere with the normal course of the chyle, and causes no modification in the size of the chyliferous vessels. Nor has ligature of the arteries any influence on the size of the related lymphatic vessels. Some experiments have also been made on larger animals, the ass and the horse. In these, under the influence of electrical stimulation of the peripheral extremity of the trigeminus, the lymphatic vessels of the upper lip were observed to become varicose, and to form a pale prominence beneath the mucous membrane. The investigators have also succeeded in reproducing, in the chyliferous lymphatics and thoracic duct of the dog, the experiments of Gubler on the veins of the hand. A slight tap on the vessel caused a narrowing which passed gradually onwards and was succeeded by dilatation.

THE DRAINAGE OF CLAREMONT HOUSE.

CLAREMONT HOUSE may be taken as a specimen—probably a fair one, though less bad than the average—of residential buildings of the eighteenth century, so far as its sanitary arrangements were concerned. These have now been reconstructed according to the approved canons of recent sanitary engineering art. Assuming, which is obviously an act of somewhat rash presumption, that the works have actually been carried out faithfully by the workmen, as the responsible on-lookers believe them to have been, and that no traps have been left unfixed, and no apertures for the escape of gas within the house have been made or neglected, there is good reason to hope the method of reconstruction adopted will prove effectual. Meanwhile it should not be forgotten in reference to this and other sanitary works which consist in adapting modern principles and apparatus to the needs of edifices built before "sewering" was *invented*—we use the term advisedly—that it is possible to make bad worse by interference, unless what is done conforms to the local conditions and fulfils their, rather than certain ideal, requirements. What we mean is this: "sewer-gas," properly so-called, is a product of the modern drainage system. The poisonous gas which now rises from sewage in motion and exposed in sewers did not rise from the accumulations of fæcal matter which occurred in the cesspools, unless these were disturbed. When the soil discharged by short drains came in contact with the earth, it gave off the products of decomposition to the earth in due and natural course, and beyond all question the earth system is the natural method of purification and sewage disposal. Cesspools under a new residential house were, of course, an abomination the moment they came to be disturbed, and before that, in most, though not all soils, they contaminated the adjacent surface wells and springs. Nevertheless, when the scheme of draining away the fæcal matter from under closets by means of large pipes was applied there immediately arose this practical difficulty: that unless the decomposing matter was rapidly and completely removed, the drain-pipes soon became gas collectors and carriers, and, by the very perfection of the drainage system, the offensive emanations of recent sewage were conducted back into the houses; and, what was worse, the system of sewers and drain-pipes became practically a system of apparatus for laying sewer gas from the most distant reservoirs or outfalls, and from the whole of a town or district, into the houses of rich and poor. The higher levels often, and the closer and more heated houses commonly, draw the most. Two remedies for this evil were devised: first, *traps*, and then *ventilation*. The position we now occupy in regard to the question of cure for sewer-gas distribution may be stated briefly thus: no trap can be perfect and no system of ventilation is really effective except when it works under atmospheric and general conditions which favour its action. The "*must* work" of sanitary engineers, however astute, is a broken reed to lean upon. As a matter of fact the so-called gas given off by decomposing sewage and laid on by drain-pipes varies greatly in density and specific gravity, and it is exceedingly difficult to make it obey the recognised law which

we assume to be applicable and inexorable. The conditions vary with each change of temperature, external and within the house; they change with the wind; they are powerfully influenced by the alterations of atmospheric pressure which affect the barometer. A careful observer may—if he takes the pains to study the matter at close quarters and is not content to imbibe his knowledge of sanitary science from books, or to gain it only through the laboratory—see the sewer gas passing in minute bubbles through many "perfect" traps under the influence of that pressure which is brought to bear on the fluid on the one side and the weight which is taken off on the other side of the theoretical septum. We are not now thinking of Claremont, or any special house or locality, but we are drawing attention to a matter of moment, and pointing out that until a system of *preventing* the decomposition of sewage is universally employed, and in the case of isolated houses and small towns the process is simple enough, there can be no safety from sewer gas. The fæcal matter accumulated in drains will decompose and give off pestilent gases or vapours, and even if we do not adopt the method which finds favour in some towns and districts, and "ventilate" this sewer gas and these poisonous emanations generally into the public streets, within a few feet of open windows, it is impossible to feel sure that we are adequately protected by any system or apparatus which has yet been invented, however ingeniously designed or ably and faithfully applied.

THE INFLUENCE OF ALTITUDE ON THE BLOOD.

AN interesting note was lately communicated to the Académie des Sciences by M. Paul Bert, on the comparative richness in hæmoglobin of the blood of animals living at high elevations. If men or animals are rapidly elevated to more than 2000 metres above the level of the sea they experience in different degrees the symptoms known in France as "mal de montagnes," and called in the Andes "soroche," or "puna," and in the Himalayas "bies." Jourdanet has expressed the opinion that these symptoms are due to a diminution in the quantity of oxygen contained in the blood, in consequence of the lower tension of the air. This conclusion is confirmed by the experiments of M. Paul Bert, which show that the amount of oxygen contained in the blood diminishes in proportion as the pressure lessens. In the case of man, however, acclimatisation occurs at the end of a certain time, and his children are altogether indifferent to the conditions which at first distressed him so much. Animals become acclimatised much sooner than men. Several hypotheses have been formed to account for this acclimatisation. One of these assumes that the hæmoglobin of the blood gradually increases in quantity, and that thus the deficiency in the amount of the combined oxygen is more than compensated for. Jolyet has found that decomposed blood, shaken up with air, absorbs exactly the same amount of oxygen as fresh and living blood. Thus, the hæmoglobin is not altered in its oxygen-absorbing capacity by putrefaction. Hence the question of the condition of the blood of animals at high altitudes can be decided by blood examined some time after it is drawn. Specimens of blood from animals living 4000 metres above the sea level, llama, alpaca, stag, sheep, pig, &c., were obtained and examined, and the results verify the hypothesis. In the case of animals born at a high elevation, and also in that of those acclimatised there, the blood (examined at a low altitude) presents a much greater capacity for absorbing oxygen than that of animals at the sea level, the amount absorbed in some instances being doubled. For the work of life, in the tissues and muscles, the animals living at a high altitude have a much more abundant storehouse of oxygen than is possessed by the animals at lower levels, or by these when first transported to a high elevation. The only condition which could invalidate this conclusion is that of a smaller total volume of blood, an extremely unlikely supposition. No doubt there are other elements in the complex problem of acclimatisation at high altitudes, but that which M. Paul Bert has demonstrated is certainly one of the most important.

INDUSTRIAL SCHOOLS.

SIR WILLIAM HARCOURT has delivered himself at last upon the subject of industrial schools. His panacea for all evils likely to arise in their management is vigilant inspection and the keeping a strict record of all punishments inflicted. His suggestions are not original, but as far as phrases go, the "big side drum" is played with great effect. Unfortunately the system of vigilant inspection has been tried before in this and similar cases, and has proved utterly futile, since none are more surprised when some scandal occurs and public indignation is aroused than those who have been engaged in this same work of vigilant inspection. Nothing blinds the eyes so quickly as a system, especially one which is content with dealing with matters of routine only. What good results can be expected of a system that limits inspection to the quality and quantity of the food, clothing, and bedding, the sufficiency of the industrial training, and to the extent and severity of the punishments inflicted? Such a system of inspection would not be sufficient even supposing the truth were arrived at in every instance, for an apparently model institution in the eyes of the inspector might be full of abuses and iniquitous practices which would not appear on the punishment sheet or diet tables. What is really wanted is the assurance that the children are healthy, happy, and contented. An ordinary inspector might spend hours looking into the diet tables and punishment records and feeling the texture of sheets and blankets, and come away with entirely wrong opinions, whilst an experienced medical man or an intelligent but unbiased layman would see at a glance whether the children were thriving or the contrary. Health, content, and happiness are what we require in these establishments, but these in the eyes of inspectors are merely subjective phenomena, and find no place in their reports; they hardly ever rise beyond whitewash, bedding, punishments, and diet.

THE NAPPER TESTIMONIAL FUND.

IN our issue of the 15th inst. we drew attention to a controversy, recently published in the *Surrey Advertiser*, as to the origin of the Cranleigh Cottage Hospital. The facts are briefly as follows. Immediately after the Committee of the Napper Testimonial Fund had issued a circular setting forth the claims of Mr. Albert Napper to be regarded as the founder of the above mentioned hospital and the father of the Cottage Hospital movement, the Rev. Canon Sapte wrote to the Committee, claiming for himself and the late Hon. Mrs. Sapte the credit given to Mr. Napper. The Committee arranged a meeting between Canon Sapte and Mr. Napper on Feb. 1st, 1882, when it was agreed unanimously the case would be met by the statement that "the first cottage hospital was founded by Mr. Albert Napper in conjunction with the Rev. Canon and the Hon. Mrs. Sapte, at Cranleigh, in Surrey, in the year 1859." Canon Sapte expressed himself satisfied with this statement, and agreed that the controversy should thus end. Circumstances occurred which induced Mr. Napper to enter upon further correspondence with Canon Sapte, which he sent for publication to the *Surrey Advertiser*. Canon Sapte then wrote a letter to the same paper claiming that the late Hon. Mrs. Sapte and himself

were in reality the originators and founders of the Cottage Hospital at Cranleigh. The only evidence which he furnished were letters from Mrs. Bradshaw and another friend, both of whom became connected with the hospital a few years after it was opened, and whose knowledge of the circumstances connected with the foundation of the hospital was therefore incomplete. Mr. Napper being thus called upon to establish his claim to be regarded as the originator of the Cranleigh Cottage Hospital, published in the county newspaper recently much documentary evidence, including a letter of Mr. W. E. Soffe, who was Mr. Napper's assistant in 1858, which proved conclusively that Mr. Napper's position is unassailable. It is satisfactory to find that an exhaustive examination of the documentary evidence must convince the most sceptical that Mr. Albert Napper is entitled to be regarded as the father of the Cottage Hospital system. Numerous subscriptions have already been promised, the committees of the various Cottage Hospitals have been invited to subscribe five pounds each towards the fund, and there is every reason to hope that the movement will result in a thoroughly representative subscription list.

THE NEW SANITARY BUREAU AT CANNES.

OUR correspondent at Cannes writes: — Apart from public works, such as the construction of sewers and the destruction of unwholesome quarters, the town of Cannes is to be congratulated on the appointment of a sanitary inspector and of a health bureau. This office is situated in a conspicuous place under the Hôtel de Ville, where all complaints, whether in English or French, are received. The sanitary inspector, formerly in the hydraulic service of the arsenal of Toulon, displays the utmost energy and goodwill, but unfortunately he cannot be expected to do more than ensure the application of sanitary measures generally recognised as sufficient in France. These consist of the thorough ventilation of cesspools, the prevention of leakage or overflow, and their efficient cleansing at regular intervals. But there is no knowledge whatever of the necessity of trapping closets and of cutting off the connexion between waste-pipes and sewers. On the other hand, great care is taken to prevent overflow of cesspools into sewers, so that only kitchen, household, and rain water descends into the sewer, and no closets are allowed which have not windows communicating directly with the outer air. This, of course, is better than nothing, and the Mayor has invited English medical men and specialists generally to instruct the sanitary inspector as to what should be done, thus manifesting a desire to learn and improve, which is rarely found on the Continent. Unfortunately, and with the exception of a few English villas, to urge the trapping of waste-pipes and closets would be to urge the reconstruction of every closet and pipe in Cannes. Also a trap requires both force and quantity in the supply of water, and this would very generally be found wanting. Still a great improvement will result from the proper ventilation and cleansing of cesspools, and all the house agents of the town have undertaken not to let villas to visitors which have not been examined and certified by the sanitary inspector. These examinations have led to many revelations, which prove the necessity of some such measure. In one case, for instance, the pipe ventilating the cesspool terminated immediately under the larder window. Many of the poorer class of houses in Cannes have no closets whatever, and the inhabitants were in the habit of emptying their utensils at night in the street gutter. Even now, and in spite of police surveillance, repulsive odours are still noticed, especially along the main thoroughfare, the Rue d'Antibes. These are not due to any defect in the drainage, but to the folly of the inhabitants of the bye streets, who come down, when the police are off the beat, and empty their filth into the mouths of the main sewer, where it remains till a strong rush of water from the gutter forces a swing valve open. Now the sanitary inspector is going the round of every house, enforcing the pail system where there are no closets. These pails or tubs must be emptied every fortnight, and notification given. If this notice is not received, the inspector calls, and, if he finds the tub empty, concludes that its contents must have been poured into the street, and consequently prosecutes the landlord. Otherwise the tubs are carried far out into the country on the backs of mules, and the contents used as manure; but the manuring of fields in the immediate neighbourhood of habitations is forbidden during the winter season. Such are a few of the measures which have been adopted to combat the evil effects produced by the outbreak of typhoid fever at Cannes. But I shall have other opportunities of returning to this subject, as it is of so much importance, considering the numerous and distinguished English visitors who yearly seek health at this favourite winter resort.

PANCREATIC DIGESTION.

THE functions of the pancreatic secretion in the process of digestion have been considerably but by no means exhaustively studied. A fresh series of experiments on the subject has been made by M. Duclaux, and described in a paper which he has communicated to the Académie des Sciences. The facts he mentions deserve notice, although they are not altogether novel. A small fragment of the pancreas will liquefy starch, leaving intact only the outer capsule of the starch grain, which is also unaffected by the diastase of germinating barley. This external capsule, if isolated, is not coloured blue by iodine unless treated also with sulphuric acid. It is variable in thickness in different kinds of starch, and seems thus to consist of true cellulose. Except this residue all the starch is dissolved. Duclaux thinks the action is too rapid to be attributed to a ferment. He points out also that the action of the pancreas on albuminoid material is not at present very clearly understood. If one or two milligrammes of pancreas are introduced into ten cubic centimetres of milk, the liquid, at the end of a few hours, is no longer coagulated by acids, even nitric, nor by acidulated ferrocyanide of potassium, and it is, moreover, clear. The pancreas thus plays an important part in the digestion of milk, which may be one of the reasons why milk diet is so useful in diseases of the stomach. In cooked meat, under the same conditions, the muscular fibres are broken up, especially towards the extremities, where they are not protected by the sarcolemma. The interfibrillary substance becomes dissolved, and so the fibrillæ become separated. The difference in action of the gastric juice and pancreatic secretion may be roughly summarised by stating that the former breaks up the fibre transversely and the latter longitudinally. But the effect is not limited to this longitudinal dissociation. The cooked meat is gradually transformed into alimentary pulp, which closely resembles that produced by the gastric juice, but there is never complete solution, although the tissue elements which resist are too small to permit their actual nature to be determined. It is clear, however, that the pancreatic juice has no more power than that of the stomach to digest indifferently the various albuminoid bodies. Another fact points to the same conclusion. The fragments of the pancreas themselves remain unchanged even after a very prolonged sojourn in the stove. Contrary to what is sometimes asserted, the pancreas cannot digest itself. When this takes place, it is only through the agency of the organisms of putrefaction. This presents a fresh instance of the law that every living cell consists of elements which are impregnable in its vital conditions to the ferments which it may secrete.

COFFEE.

THE resolutions which were proposed by the Prime Minister after his financial statement on Monday must be looked upon as steps in the right direction. Henceforth the sale or exposure for sale of any vegetable matter, other than chicory, in imitation of or mixed with coffee, is to be *illegal*. Henceforth, when a purchaser asks for a pound of coffee, it will be quite legal to sell him fifteen ounces of chicory and one ounce of coffee (provided a perfunctory notice be somewhere concealed upon the wrapper); but woe to the man who has adulterated his chicory (as often is the case) with dates or cabbage-stumps or dandelion. This is legislating upon scientific principles with a vengeance; and we cannot understand how Mr. Gladstone, after really bending his powerful brain to consider this subject in the interests of the masses, can still allow the grocers to sell their comparatively worthless "admixtures" and charge the price of coffee. He might as well allow the Hall mark to be put on electro-plate or nickelised iron. No possible reason can be given for encouraging the admixture of chicory with coffee. Chicory makes a black and bitter drink, which does no harm to the consumer possibly, but cannot in any way be regarded as a substitute for coffee, which is a stimulant of a most valuable and powerful kind. We ask for no restrictions on the sale of chicory, dates, cabbage-stumps, finings, dandelion, or any other roasted offal which the public may be induced to drink, for the worst that can be said of such drinks is that the taste for them has to be acquired, and that dietetically they occupy a negative position. Let them be put in *competition* with coffee by all means, for if (like Mr. Gladstone's favourite chicory) they be of any real value, the price of coffee must fall, which will be an advantage to those who have a taste for the genuine article. There is no sufficient evidence that there is any advantage in mixing coffee with chicory, and we think that Mr. Gladstone's remarks on this head are calculated to seriously mislead the public. The sale of coffee should be entirely separated from that of chicory, for the two can be mixed with a spoon by the consumer, and the countenancing of the sale of "admixtures" is certainly dangerously antagonistic to the spirit of the Adulteration Act. The practice of mixing is in every sense adulteration. We strongly advise Mr. Gladstone to protect coffee with all the stringency with which tea is protected. The 30th clause of the Adulteration Act is especially designed to prevent the importation of adulterated tea, and we hold that a similar protection for coffee is proved to be an urgent necessity in the interests of growers, retailers, consumers, and the revenue.

AN ECONOMY OF INSPECTORS.

MR. W. HEY, of Hounslow, directs attention to the fact that the inspector of nuisances there is also the school-board inspector. Now, as the inspector of nuisances, who appears to be a most estimable and active man, has much work to do with the infectious disease hospital for the district, with infectious diseases, and with processes of disinfection, and as he does his work no less efficiently as school-board inspector, being, in consequence, brought much in contact with persons having young families, Mr. Hey can see no congruity in appointing the same individual to the two offices. The nuisance inspector must, he thinks, be a means of distributing infection through the school-board inspector. He would have the appointments separated, and each inspector paid amply for his services. We hold that he is right in his "plea for separation," and that the sanitary authority, once the matter is brought before its consideration, ought not to consent to perpetuate such an incongruity.

THE HANDWRITING OF SHAKESPEARE.

MR. CORDY JEAFFRESON, who by name is so closely connected with our profession, though he belongs to another, and whose "Book about Doctors" we all know, has made a most striking contribution to Shakesperian history. Presiding on Tuesday night at the annual Shakesperian dinner of the famous literary coterie called "Our Club," Mr. Jeaffreson brought forward a facsimile copy of the will of the national poet, and, comparing with singular skill the signatures on the will, which are certainly those of Shakespeare, with the writing in the body of the will, he drew the almost certain conclusion that the whole of the document is actually in the handwriting of the immortal poet himself. The argument was strengthened by various other expositions showing that a legal mind could hardly have been concerned in drawing up the deed, and that the whole paper was, in fact, merely an unfinished draft, which in the hurry of the moment, when the great life was ebbing away, was brought for signature and signed by the dying hand. The theory chimes in well with the account of the death of Shakespeare in Ward's Diary, which is in the possession of the Medical Society of London, and which tells in its quaint language how sudden was that last and sad event.

THE CAUSE OF PELLAGRA.

THE chemical composition of maize, which is much used in Italy and the south of France as an article of diet, shows that its alimentary value is very high. Unfortunately it is often diseased, and there is little doubt that the endemic malady of North Italy, pellagra, is due to the consumption of diseased maize. In the hospitals of certain large towns of Italy, Padua, Brescia, &c., no less than five or six thousand cases of pellagra come under treatment every year; and statistics show that, in certain districts, not less than twenty or thirty per thousand of the population are affected. An Italian physician, Dr. Lambroso, has shown, by a series of experiments as to the cause of pellagra, that it is unquestionably due to diseased maize, which produces, even in dogs and rabbits, some of the symptoms of the malady. He also made observations on certain benevolent individuals, who took daily six grammes of an alcoholic tincture of diseased maize. The usual symptoms of the disease rapidly made their appearance: boulimia, followed by distaste for food, colic and diarrhœa, rapid prostration and loss of weight, giddiness, headache, affection of sight, cutaneous changes, pruritus, desquamation, and dryness of the skin. Having shown the certainty with which pellagra could be produced by this tincture of maize, Lambroso next endeavoured to ascertain whether the effect was due to any one active principle contained in the tincture. After a long series of researches he found an alkaloid, to which he gave the name of pellagrozein (from *zea*, maize). Its chemical reactions showed that it was nearly allied (among alkaloids) to strychnine. The injection into a frog of half a gramme of this substance caused at the end of half an hour general tetanic convulsion and rapid death. In rabbits, rats, and cats the same effects are obtained only by large doses, two or three grammes per kilogramme of body weight. The symptoms produced are quite similar to those in the frog. These experiments are very interesting in connexion with certain symptoms of pellagra—the trismus, retraction of muscles, increased sensibility, and convulsions,—and make it probable that they at least are due to the slow absorption of this alkaloid. In the treatment of pellagra Lambroso has found most effect from arsenic, in daily dose of half or one-third of a milligramme, and this, not only in hospitals, but in the treatment of cases under extremely unfavourable hygienic conditions. As prophylactic measures he recommends that the cultivation

of certain varieties of maize should be discontinued, and others less liable to disease should be substituted. He also suggests that it should be well dried and heated, after which it may be kept for some years without alteration, and is then much safer than when first obtained.

PHYSIOLOGY AT MASON'S COLLEGE.

No institution, for the promotion of higher education, was ever launched more hopefully than the Science College at Birmingham, recently erected and endowed by Sir Josiah Mason at a cost of nearly a quarter of a million sterling. The arrangements are after the best models in our own and foreign countries, Germany especially. Everybody seems to have been agreed that the materials for research should be so far as possible perfect; not so the methods. The Professor of Physiology, soon after his appointment, applied for permission to make some researches in the lower forms of living animals, but the governing body of the College withheld their assent pending inquiry. Amongst the Societies which assemble in Mason's College is one styled "the Philosophical," before which Mr. Lawson Tait read a paper on the 20th inst., "On the Uselessness of Vivisection as an Instrument of Scientific Research," and the debate was adjourned for a week. As intention was announced to publish the address, we withhold comment on the brief, and possibly imperfect, reports which have reached us. Mr. Tait is known as one of the foremost advocates of the operation of spaying in women, and it will be curious to see how he opposes the performance of experiments on animals for purposes of scientific research.

THE BIRMINGHAM WORKHOUSE.

THE Local Government Board have made known the results of the inquiry of Dr. Mouat and Mr. Henley into the medical administration of the Birmingham Workhouse. The Board concludes from the evidence laid before the inspectors that no charge of cruelty against the medical officer, or the assistant medical officer has been sustained; that no application of blisters or shower baths was proved to have been ordered for disciplinary purposes; and further, that it was not proved that remedial treatment in any form had ever been resorted to as a mode of punishment. The Board express the opinion that there existed no real foundation for this belief, but at the same time they state that the action of the nurse in threatening to report to the medical officer all cases of misconduct on the part of the inmates—which reports were sometimes followed by the use of remedial measures—tended to strengthen the belief in this respect. Both Dr. Mouat and Mr. Henley expressed themselves satisfied with the general condition in which they found the workhouse after their close investigation.

THE SANITARY INSTITUTE.

AT a recent meeting of the Sanitary Institute Mr. Henry C. Stephens, F.C.S., read a paper "On Obstruction by Law to Sewage Disposal." He maintained that as the law stood it prevented local sanitary authorities from carrying out systems of drainage involving the separation of the rainfall and surface water from the sewage. He claimed for the separate system greater economy in drainage, and greater impermeability in the construction of sewers; greater efficiency in flushing; the prevention of flooding by sewage; a better prospect of remunerative return for works of utilisation; greater absolute purification; and diminution of the possible extent of water contamination. In the discussion which followed the reading of the paper Mr. R. C. Robins, Mr. F. Simmonds, Mr. Rogers Field, Mr. David Chadwick, and others took part.

SEWER VENTILATION IN THE CITY.

IN a recent report Dr. Sedgwick Saunders directs attention to the increasing nuisance arising from the sewer-ventilators, level with the surface of the streets, in several of the narrow thoroughfares of the City. He calls attention, indeed, in one instance, to cases of typhoid fever, blood-poisoning, throat affections, and other ailments of a zymotic type, which have been attributed to diffusion of sewer air from the ventilators into the adjacent offices. He would have the question of the condition of the City sewers submitted to the City engineer. Meanwhile he suggests an abatement of the evil by the closure of the street ventilating gratings entirely, and the erection of upright shafts, six inches in diameter, to be carried above the roofs of the adjacent houses. He would further suggest that the whole of the manholes be opened at stated times during the night, together with other appliances for ventilation, when the City is empty, with a view of giving immediate relief.

SIR ERASMUS WILSON.

WE are glad to be able to report that the health of Sir Erasmus Wilson has slightly improved during the past week, in spite of the somewhat unfavourable state of the weather.

ABERDEEN UNIVERSITY.

THE ceremony of graduation in Medicine at Aberdeen University took place on the 21st inst. The Very Rev. Principal Pirie officiated on the occasion, supported by the members of the Senatus Academicus, in the presence of the students and friends of the graduates, who, as usual on such occasions, filled the Graduation Hall. The degrees of M.B. and C.M. were conferred on thirty-two candidates; and the degree of M.D. on sixteen candidates, previously Bachelors of Medicine. At the conclusion of the proceedings the Rev. Principal took occasion to compliment the students of medicine on their orderly conduct.

THE BUDGET.

MR. GLADSTONE'S speech on the Budget on Monday night exhibited the ease and flow of the master, if at the end he showed some signs of fatigue, and if the whole performance lacked, as in the nature of things it did, the brilliance of his former Budget speeches. There is little to call for remark from us, excepting a word of congratulation on the acknowledged decline in the consumption of drink, and of assurance that the British taxpayer may still further reduce his allowance of alcohol, with advantage to his health as well as his pocket. We may add a word of complaint against the additional taxes on carriages; or, at least, of suggestion that carriages needed for professional purposes should be exempted from increased taxation.

THE BRITISH LYING-IN HOSPITAL.

WE have received the report of this institution, and find it shows the hospital to have been in a very healthy condition during the past year. Antiseptic precautions have been adopted in the wards with the result of procuring better recoveries with less feverishness of the patients. In the hospital 160 women were delivered, 32 of whom were primiparæ, with only one death; 496 women were delivered at their own homes, with one death. Among the in-patients there were 6 cases requiring operative interference, and 8 such cases among the out-patients. The working of this hospital, as well as that of the General Lying-in Hospital noticed in our columns last week, appears to be in a very satisfactory condition.

PURIFICATION OF THE THAMES.

A DEPUTATION from the Port of London Sanitary Committee have recently visited the works of the A B C (Native Guano) Company at Aylesbury. The deputation were received by the Hon. W. Massey-Mainwaring, chairman of the company, and others; and after carefully inspecting the process of depurating the sewage, and the materials used in the process, expressed themselves, through the medical officer of the port, Dr. Collingridge, as quite satisfied with the results as concerned the effluent.

THE CONVICT LAMSON.

THE following letter was received by the convict's solicitor on Wednesday last:—

"Whitehall, April 26th.

"SIR,—I am directed by Secretary Sir William Vernon Harcourt to acquaint you that he has considered the affidavits and declarations forwarded by you respecting the case of George H. Lamson, and regrets he can find in them no sufficient ground for advising an interference with the sentence of the law. I am, Sir, your obedient servant,

"A. F. O. LIDDELL.

"Mr. A. W. Mills, 6, South-square, Gray's-inn."

AT a special meeting of the governors of the Hastings and St. Leonards and East Sussex Infirmary, the vexed question of site was finally settled. A resolution affirming the inadequacy of the present building, and the desirability of procuring a new site, and erecting another hospital thereon, was proposed by Dr. Bradshawe, and was supported by several speakers. There appeared, however, to be a strong feeling that the present site might be made available to hold all the additions to the existing building that were required; and an amendment moved by Canon Crosse to this effect was carried by a large majority. The Site Committee were instructed to elicit the views of the medical staff as to the matters needing improvement, and to report to a subsequent meeting of governors.

IN the report of Messrs. Crookes, Odling, and Meymott Tidy on the London water-supply derived from the river Thames and Lea during the month of March, they observe that: "Taking into consideration the freedom from excess of organic matter, and the general excellence of the water in respect to clearness and the absence of colour, we would endorse the opinion of the Royal Commission who last reported on the subject, to the effect that the water supplied by the London companies is 'perfectly wholesome and of suitable quality for the supply of the metropolis.'"

A RECENT number of the *Indian Medical Gazette* (March 1st) contains two interesting papers upon micro-organic pathology. The one is a review of present knowledge upon Micro-organisms in Disease, by Surgeon O. G. Wood, M.B.; and the other is upon the Bacillus Malaria, by Surgeon-Major Oldham. Mr. Oldham advances numerous arguments against the view of the bacillus being the cause of malaria, and shows especially how irreconcilable that doctrine is with what is known of the conditions under which malarial fevers arise in India.

PROFESSOR EICHORST, of Göttingen, whose admirable Text-book on Physical Diagnosis was recently published, has commenced writing a Handbook of Medicine, two parts of which have already appeared. If we may judge of the whole from these instalments, we may expect a work which, for clearness and general excellence, will almost rival the popular text-book of Niemeyer.

WE learn that the authorities of the Middlesex Hospital are engaged in considering a scheme for the enlargement and extension of the out-patient department, the accommodation at present being quite insufficient for the large number of patients attending. It is hoped that the work will be undertaken this summer, in connexion with the changes necessitated by the foundation of a male cancer ward in memory of the late Mr. De Morgan, for which a considerable fund has been obtained.

PROFESSOR GROSS has resigned the Chair of Institutes and Practice of Surgery at Jefferson College, and has been appointed Emeritus Professor of Surgery in the College. The duties of the chair so long and worthily held by Dr. Gross have been divided, the Principles of Surgery and Clinical Surgery being allotted to Dr. Samuel W. Gross, and Practical Surgery and Clinical Surgery to Dr. John H. Brinton.

AT the recent Warwickshire Quarter Sessions Dr. Bostock Hill, the county analyst, reported that fifty-four samples of milk had been submitted to him during the quarter. Of these samples seventeen were adulterated with water in amounts varying from 4 to 25 per cent. Several samples were deprived of their cream, one to the extent of 50 per cent.; and of five samples of butter submitted, one consisted entirely of foreign fat.

MR. THOMAS WARDROP GRIFFITH, M.B., C.M., has succeeded the late Dr. Fife Jamieson as Demonstrator of Anatomy at the Aberdeen University. Mr. Griffith was first prizeman in the anatomy class, and had awarded to him, at the recent graduation in Medicine, the John Murray Medal and Scholarship, as the most distinguished graduate of his year.

THE Report on Medical Education, which has been drawn up by Messrs. Teale, Gairdner, and Stokes, after visiting the various examinations, has been forwarded to the medical corporations for any suggestions or comments. It is very exhaustive and valuable, and its publication at the coming meeting of the General Medical Council is looked forward to with great interest.

WE have received the second volume of the Sixth Session of the International Medical Congress, held in 1879 at Amsterdam. It contains the proceedings of the sections of Public Medicine, Psychiatry, Ophthalmology, Otology, and Pharmacology, and an account of the exhibition and social gatherings during the meeting. The volume is in the French language.

IT is announced that in the section of Pathology (Dr. Hughlings Jackson, President) at the forthcoming meeting of the British Medical Association at Worcester, a debate upon the Morbid Anatomy and Pathology of Diabetes will be opened by Professor Hamilton of Aberdeen University, and one on the Origin of Tumours by Mr. Jonathan Hutchinson.

THE Harveian Society of Edinburgh recently celebrated (on the birthday of Harvey) its centenary by a festival dinner, at which many notabilities were present. Dr. Maclagan, the President of the Society, was in the chair, and, in proposing the toast of the evening, gave an admirable account of Harvey, which we trust will be printed.

THE very excellent Text-book of Pathological Anatomy, by Dr. Ziegler, of Zurich, the first part of which appeared less than a year ago, is being translated by Dr. Macalister, and may be expected in a few months.

THE President of the Royal College of Physicians of London has nominated Dr. Stevenson, of Guy's Hospital, to the post of Scientific Analyst, to conduct any analyses of bodies of deceased persons that may be ordered by the Secretary of State in the interests of justice during the year beginning May 1st next.

MR. BARRAUD, of 96, Gloucester-place, Portman-square, W., has succeeded in taking a very fine photograph of Sir W. Muir, K.C.B., Director-General of the Army Medical Department. In view of that officer's approaching retirement, we feel certain many members of our profession in the army will be glad to be able to obtain this excellent picture.

THE debate on the Lunacy Laws, which took place in the House of Commons on Tuesday last, was wholly ineffectual, and showed nothing so much as that very few of the speakers understood the subject, and no party or section of the legislative body is prepared to deal with it in a practical and useful sense.

DR. J. MURRAY GIBBES, of New Plymouth, N.Z., writing in the *Australasian Medical Gazette*, advocates the employment of blue gum steam inhalations in diphtheria as a simple and satisfactory method of topical medication for detaching the false membrane, after the preliminary use of swabbing with iron and glycerine.

A TELEGRAM received by the Constantinople Sanitary Board from the Persian frontier, states the physicians' opinion concerning the reported outbreak of plague. The epidemic, they say, is not the plague, but a disease originated by a peculiar malady prevalent amongst cattle in the neighbourhood.

MR. SPENCER WALPOLE, Inspector of Fisheries, has been appointed to the post of Governor-General of the Isle of Man. This appointment will leave Professor Huxley First Commissioner, and make the Second Commissionership vacant for the nomination of the Home Office.

WE understand that certain important changes in the conduct of the Society's meetings, particularly with reference to the reading of papers, a duty now falling upon the secretaries, are under the consideration of the Council of the Royal Medical and Chirurgical Society.

A MOST valuable contribution to the literature of fevers has been made by Dr. Vandyke Carter in his laborious and exhaustive work on Spirillum Fever—the name he has applied to Famine or Relapsing Fever. We hope shortly to give a full notice of this work.

THE inaugural address of Mr. Francis Mason, as President of the Medical Society of London, has been printed. It reviews the recent work and progress of the Society, and is valuable for the suggestions as to future work which it contains.

THE seat in the French Academy rendered vacant by the death of M. Littré, was occupied for the first time on Thursday by M. Pasteur. The new Academician was welcomed by M. Renan.

THE inaugural meeting of the Spanish Hygienic Society was held on the 23rd inst. at Madrid. King Alfonso opened the proceedings in a speech remarkable for its warm terms of appreciation of the value of sanitary science.

THE Bill for promoting a supply of spring water to south-west London and suburbs has been rejected by the Select Committee of the House of Commons appointed to hear it.

ABOUT 160 medical men from all parts of Austria and Germany were present at the German Medical Congress, held this week in Wiesbaden.

THE Annual Oration of the Medical Society of London will be delivered on Monday next, by Dr. Symes Thompson.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Port of London.—Dr. Collingridge in his report for the half-year ending December 31st, 1881, directs attention to the growing tendency for the trade of the port to pass farther and farther down the river. This he holds is obviously due to the great change which is passing over the mercantile marine, by which smaller vessels are gradually being superseded by large steamships. For these ships special arrangements have to be made on account of their great length and draught of water, which render it desirable to avoid a tedious and dangerous voyage up the river. In addition to large docks already constructed lower down the stream, and capable of receiving some of the largest steamers entering the port of London, others equally capacious are projected as low down as Tilbury. These additional docks add seriously, and as they are completed will further add, to the duties imposed upon the Port of London Sanitary Authority. The "state of the river" first occupies Dr. Collingridge's attention. Nothing is added to the information given in the special report issued on this subject by the Port Sanitary Committee a short time ago; but we are again struck by the disproportion between the conclusions arrived at and the meagreness of the data they are based upon. The recent small-pox epidemic in London appears to have fallen upon the shipping population in the Thames and docks comparatively lightly. Ten cases only are recorded during the past half-year. Referring to the Metropolitan Asylums Board small-pox hospital ship, the *Atlas*, moored off Deptford, Dr. Collingridge remarks that it has been the source of many complaints to the sanitary authority, but, although it is in a "most unsuitable position," still up to the present time there has been no single case in which infection has been traced from it, nor, indeed, has any case been well founded. There were only two other cases of disease requiring the attention of the medical officer of health: one a case of remittent fever, the other of typhoid. Some importations of unsound food demanded attention, and with the aid of the Customs and City medical officer of health, both of whom had more or less concern with the offending matter, the subject was effectually dealt with. Dr. Collingridge reports the health of the boys on the school ships on the river as being "extremely satisfactory, there having been almost complete immunity from infectious disease." But *à propos* of two cases of scarlet fever which occurred on board the *Shaftesbury*, he takes occasion to point out the advisability of establishing a building on shore, in relation to the school ships, in which new arrivals fresh from shore could be placed for ten days or a fortnight, for a "quarantine of observation," before admittance on board the ship. Observations follow on the relation of the foreign cattle market, Deptford, to the Port Sanitary Authority; and on the occurrence of cholera in the Red Sea ports in the autumn. "So far as the port of London was concerned," Dr. Collingridge writes, "the outbreak merely gave rise to increased vigilance and extra care in the inspection of vessels from infected ports. In the event of such disease appearing in the Thames, the existing arrangements would, I believe, be amply sufficient to prevent danger of extension." The number of vessels inspected during the whole of the year 1881 was 22,315, as compared with 13,846 during 1874; the number requiring cleansing processes was, during 1881, 428,

as compared with 2330 in 1874. This improvement in the condition of ships has been steady from year to year within the period.

Hove.—Dr. Kebbell reports for this town, during 1881, a death-rate of 14·7 per 1000 of the population, and a birth-rate of 26·6, the death-rate being nearly 9 per 1000 under the average mortality of towns, and 4·5 per 1000 under that of country districts; the birth-rate comparing with an average in all England and Wales of about 35 per 1000. The mean of the death-rate for the town during the seven years (1875-1881 inclusive) was 13·2 per 1000 living. With the exception of an outbreak of small-pox, which caused 24 deaths, the disease-history of the year was uneventful. This outbreak has now pretty well ended, but it served to show how imperfectly Hove was prepared to contend with such a calamity. Let us hope that it will stimulate so important a health-resort to place its sanitary administration in better order.

Blackpool (Urban).—Dr. Leslie Jones reports for this favourite health-resort during 1881 a death-rate of 18·6 per 1000 living, and a birth-rate of 30·6, or, excluding deaths not actually belonging to the borough, a death-rate of 15·8. There was a noteworthy decrease of infantile mortality, as well as an absence of small-pox, from the borough, and no deaths from measles, scarlet fever, or diphtheria were registered. Whooping-cough was the most prevalent disease, and the population was conspicuously free from fevers. Considerable attention was given to the water-supply of the place. The town's water is reported as of a most satisfactory nature. Wells of doubtful character are being gradually done away with; and a subcommittee has been specially appointed to inquire into sources of water-supply other than those derived from the town's reservoirs. Yet notwithstanding this favourable report, Dr. Leslie Jones is not satisfied with the sanitary arrangement of the town. He longs for a compulsory notification of infectious diseases; he is dissatisfied with the amount of hospital accommodation for infectious diseases; he would have fitting accommodation for disinfection, which, a range to say, Blackpool does not possess; and he would have slaughter houses and marine stores better regulated. The borough surveyor's report, attached to the medical officer of health's report, shows that much work is being done in the improvement and extension of the drainage of the borough; but it still adheres to those filthy adjuncts peculiar to an old Lancashire town—to wit, ashpits, and those of an unimproved order.

Liverpool.—At a recent meeting of the Health Committee Dr. Stopford Taylor took occasion, with reference to the spread of infection, to allude to several cases of typhus fever, and point out how much the health department was hampered by the want of some system of notification of infectious diseases. He spoke also of the control of lodging-houses and hospital accommodation for emigrants. It appears from a letter of the Board of Trade to the Corporation that one of their officers had reported to the Board the rejection of several emigrants suffering from infectious diseases, and the want of an official control of lodging-houses. But how it came to pass that this officer ignored the powers and duties of the Port Sanitary Authority and the provisions of the Public Health Act in relation to infectious diseases is inexplicable. Is it possible that the officer knew nothing of the proceedings of the Port Sanitary Authority and the Urban Sanitary Authority in regard to emigrants?

Leeds.—Dr. Goldie is not able to report so favourably of his borough during the five weeks ending April 1st as he was during March. Still, the death-rate was not excessive as compared with the twenty large towns. The births equalled a rate of 35·8 per 1000 living at all ages; the deaths a rate of 22·3 per 1000. He thus sums up the progress of small-pox in the borough since his previous report:—"Since the last report I made to the sanitary committee, the total number of small-pox cases has amounted to fifty-three since the beginning of 1882, and of those twenty-seven have occurred since March 5th. The contagion has spread in very peculiar and, in some cases, unaccountable ways. It is so interesting that I shall record two cases as examples of how the disease is conveyed from house to house at great distances apart. Household No. 1 consisted of father, mother, and three children. Father and one boy were employed hawking in the streets, and had visited an infected district and people. Boy A became affected with small-pox. The brother of this boy, whom I shall call boy B, attended school until the disease was diagnosed. Then he ceased. The second case occurred three-quarters of a mile from the first case. I could find no trace of case No. 2 until I began to ask where the children were educated. I then found that boy C attended at the same school, and sat in the same class as did boy B, whose brother was ill. Now, neither this little boy B nor C was in the least affected with the disease, they were simply the medium of conveying the infection. Thus A infected his brother B at home, B in ignorance went direct to school, sat next to C, infected him, and he, C, carried the disease germs home, and his poor mother began with small-pox, and is now in hospital along with the mother of boys A, B, and their sister; in all five cases are accounted for in this history, arising from a visit or two to an infected district. I have been forcibly struck with the number of persons who have caught the disease who have little shops as their business places. I account for it in this way—that there are and have been cases, either suffering or persons infected, as the boys B and C, going about our streets and shops, and communicating the disease to others. This only goes to show the pressing necessity for the immediate notification of all dangerously infectious diseases."

Scarborough.—Dr. Taylor reports for the quarter ending March 31st a death-rate of 17·46 per 1000 of the population.

The Birmingham plumbers have ventured to protest against the Waterworks department of that Corporation undertaking the duty of keeping the household fittings of the water service in repair. In this way only has it been found practicable to avoid the losses and mischief occasioned by the inefficient work carried out by the local plumbers. The line of argument adopted on presentation of the protest is shown by the way one speaker put it: "it was not a question as to whether the ratepayers would be gainers or losers by the proposed scheme; the only question was as to whether they were going to do what was just and right towards a large body of tradesmen"—in other words, whether the public was made for the plumber or the plumber for the public.

The Medical Officer of Health for Bristol reports that a barmaid, taken ill with small-pox in Wells, was recently conveyed from that city to Bristol without any previous arrangement being made for her reception there, and, being refused admission to the house, that of a relative, to which she was carried, the case fell into the hands of the sanitary authority, by whom the patient was received into the sanitary hospital. Dr. Davies justly protests against this "rash and reckless" act, which reflects great disgrace upon the sanitary administration of Wells.

Mr. Arnold J. Taylor, one of the engineering inspectors of the Local Government Board, has been holding an inquiry at Brentford relative to the disposal of the sewage of that place.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 6224 births and 3677 deaths were registered during the week ending the 22nd inst. The annual death-rates in these towns, which had been equal to 22·3 and 24·3 in the two previous weeks, declined again last week to 22·7. The lowest rates in these towns last week were 16·8 in Halifax, 18·6 in Leicester, 18·7 in Cardiff, and 19·9 in Oldham. The rates in the other towns ranged upwards to 28·5 in Portsmouth, 30·7 in Manchester, 30·9 in Blackburn, and 34·0 in Wolverhampton. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 575, and showed a decline of 31 from the number returned in the previous week; 214 resulted from whooping-cough, 149 from measles, 70 from scarlet fever, 47 from "fever" (principally enteric), 43 from diarrhœa, 35 from diphtheria, and 17 from small-pox. The lowest death-rate from these diseases occurred in Halifax, and the highest in Portsmouth and Wolverhampton. The largest proportional fatality of whooping-cough occurred in London and Brighton; of measles in Portsmouth, Bolton, Brighton, and Wolverhamptom; of scarlet fever in Nottingham, Wolverhampton, and Hull; and of "fever" in Preston and Leeds. The 35 deaths from diphtheria in the twenty eight towns included 19 in London, 4 in Portsmouth, and 3 in Liverpool. Small-pox caused 10 deaths in London and its suburban districts, 3 in Leeds, 3 in Bolton, and one each in Nottingham, Preston, and Sheffield.

The number of small-pox patients in the metropolitan asylum hospitals, which had been 352 and 337 on the two preceding Saturdays, rose again to 350 at the end of last week; 66 new cases of small-pox were admitted to these hospitals during last week, against but 32 and 47 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London declined again to 331 last week, from 333 and 392 in the two preceding weeks; and were 74 below the corrected weekly average. The causes of 87, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Birkenhead and Preston; whereas the proporions of uncertified deaths were largest in Wolverhampton, Bolton, Oldham, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had been equal to 22·1 and 24·8 per 1000 in the two preceding weeks, declined again to 23·2 in the week ending the 22nd inst.; this rate exceeded by 0·5 the mean rate in the twenty-eight English towns. The deaths referred to the seven principal zymotic diseases in these towns, which had been 94 and 103 in the two previous weeks, declined again to 94 last week; of these, 28 resulted from whooping-cough, 21 from measles, 17 from diarrhœa, 10 from scarlet fever, 9 from "fever," 9 from diphtheria, and not one from small-pox. The annual death-rate from these zymotic diseases averaged 4·0 per 1000 in the eight towns, and was 0·5 above the average rate from the same diseases in the English towns; this zymotic rate ranged from 1·7 in Perth, to 4·8 in Aberdeen and 5·5 in Paisley. The 28 fatal cases of whooping-cough corresponded with the number in the previous week, and included 15 in Glasgow and 7 in Edinburgh. The 21 deaths from measles showed an increase upon recent weekly numbers; 8 occurred in Edinburgh, 6 in Glasgow, and 3 in Paisley. The deaths attributed to diarrhœa were again excessive, and considerably exceeded the number in the corresponding period of last year. Scarlet fever caused 3 deaths in Dundee, and 2 both in Glasgow and Leith. The 9 deaths referred to fever included 3 both in Glasgow and Aberdeen; and of the 9 fatal cases of diphtheria 6 occurred in Glasgow and 2 in Dundee. The deaths from acute diseases of the lungs in these eight towns, which had been 116 and 137 in the two preceding weeks, declined to 114 last week, and were 21 below the number returned in the corresponding week of last year.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 27·7 and 28·3 per 1000 in the two preceding weeks, further rose to 36·3 in the week ending 22nd inst. During the first three weeks of the current quarter the death-rate in the city averaged 30·8 per 1000, against 21·9 in London and 21·6 in Edinburgh. The 242 deaths in Dublin last week showed a further increase of no less than 53 upon the numbers returned in the two previous weeks. They included 21 which were referred to measles, 5 to "fever" (typhus, enteric, and simple), 3 to diarrhœa, and not one either to small-pox, scarlet fever, diphtheria, or whooping-cough. Thus 29 deaths resulted from the principal zymotic diseases, against 22 in each of the two preceding weeks; they were equal to an annual rate of 4·3 per 1000, against 3·4 and 4·0 in Edinburgh from the same diseases. The 21 deaths from measles showed a considerable increase upon the numbers in the two previous weeks, and raised the number recorded within the city since the beginning of the year to 481. The 5 deaths from "fever" were within 2 of the number returned in each of the two previous weeks; the fatal cases of diarrhœa showed an increase. The deaths both of infants and of elderly persons were more numerous than in any recent week.

ST. JOHN AMBULANCE ASSOCIATION.—New police classes have been formed at Scotland-yard, Carter-street, Leman-street, Albany-street, Blackheath-road, and Twickenham Town-hall stations. The "Aide Mémoire," by the late Surgeon-Major Shepherd, has now been translated into Italian and Maltese, and a copy in Russian has just been received from St. Petersburg, where, as in Germany, the ambulance work instituted by the Order of St. John is making progress.

THE SERVICES.

THE GUARDS' HOSPITALS.

The Secretary of State for War has ordered the Director-General of the Army Medical Department to take over the administration of the hospitals of the Brigade of Foot Guards in London, Windsor, and Caterham. The medical arrangements of the Guards have hitherto been conducted on a purely regimental system; but will henceforth be brought into harmony with the station hospital plan common to all army hospitals. The medical officers of the Guards will, however, remain, as at present, regimental officers, and will continue to look after the sick of their individual regiments, the Brigade Surgeon supervising the arrangements generally under the authority of the Principal Medical Officer of the Home District. The non-commissioned officers and men of the Guards who have been employed in attendance on the sick are permitted to volunteer for the Army Hospital Corps; and we understand that a considerable number of them have done so. The hospitals of the Household Cavalry are to remain until July next on their present footing.

Surgeon-General T. Crawford, the future Director-General of the Army Medical Department, arrived at Plymouth in the s.s. *Ravenna*, on the 14th. He relieves Sir William Muir, K.C.B., as Head of the Medical Service of the Army on May 7th.

The annual dinner of the officers of the Army Medical Department will take place on Saturday, May 27th, at the Inns of Court Hotel, Lincoln's-inn, at 7.30 P.M., the Director-General in the chair.

Deputy Surgeon-General G. Moffatt, Army Medical Department, has applied to be allowed to retire from the service on the retired pay of his rank.

Brigade Surgeon Benjamin Simpson, M.D., Bombay Medical Service, has been promoted to the rank of Deputy Surgeon-General.

Surgeon Major G. W. Jameson, Bombay Medical Service, is permitted to retire from April 4th, on the pension of his rank.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon William J. Eames, to the *Duke of Wellington*, additional, for service at Lisbon Hospital; Surgeon James Simms, to Plymouth Hospital, vice Preston.

THE ADVANCEMENT OF MEDICAL SCIENCE BY RESEARCH.

THE Council of the Association having this object, which was formed at the influential representative meeting reported in these columns on March 28th, held its first meeting at the Royal College of Physicians on Thursday, the 20th inst. Beside the *ex-officio* members representing the Scotch and Irish Universities and Medical Bodies, the English Universities, the British Medical Association, and the Medical Societies, the Council consists, by the third rule passed last month, of members specially nominated by the President of the College of Physicians and the President of the College of Surgeons. The list so nominated for the present year is as follows:—Sir William Gull, Sir Risdon Bennett, Prof. Burdon-Sanderson, Drs. Quain, Andrew Clark, Lauder Brunton, Payne, Pye-Smith, Roberts (Manchester), Michael Foster (Cambridge), Balthazar Foster (Birmingham), and Dr. Farquharson, M.P., Sir James Paget, Mr. Darwin, Sir Joseph Fayrer, Mr. Bowman, Prof. Huxley, Mr. Simon, Mr. Spencer Wells, Prof. Gamgee (Manchester), Prof. Gerald Yeo, Mr. Hutchinson, Dr. M'Donnell (Dublin), and Mr. Teale (Leeds).

The lamented death of Mr. Darwin occurred on the day before the first meeting of the Council. The great naturalist himself, the son, the grandson, and the father of physicians, took the warmest interest in the new Association from the first, and was a munificent subscriber to its funds. The vacancy in the Council caused by his decease was filled up on Thursday by the nomination of Sir Henry Thompson.

Sir William Jenner, the President of the Association, took

the chair. The offices of Vice-Chairman of Council, Treasurer, and Secretary were filled up as follows:—Vice-Chairman, Sir James Paget; Treasurer, Dr. Wilks; Secretary, Dr. Pye-Smith. An executive Committee was then chosen from the Council, to consist of the following members:—Mr. Bowman, Dr. Brunton, Dr. Andrew Clark, Dr. Matthews Duncan, Dr. Farquharson, Prof. Flower, Dr. Michael Foster, Sir William Gull, Prof. Huxley, Prof. Humphry, Mr. Lister, Mr. Marshall, Dr. Payne, Dr. Quain, Prof. Sanderson, Mr. Spencer Wells, Prof. Gerald Yeo. The first duty assigned to this Committee was the appointment of Corresponding Members of Council in each of the most important cities and towns throughout the kingdom, so as to enlist the support of the whole profession in this endeavour "to promote those exact researches in physiology, pathology, and therapeutics which are essential to sound progress in the art of healing, and to remove any hindrances which obstruct these researches." Before separating the Council passed a cordial vote of thanks to Prof. Gerald Yeo for the zealous services he has rendered as provisional secretary during the formation of the Association. A first list of subscriptions will shortly be published.

Letters to the Treasurer should be addressed: Dr. Samuel Wilks, F.R.S., 72, Grosvenor-street, W., and those to the Honorary Secretary, Dr. Pye-Smith, 54, Harley-street, W.

THE EXHIBITION OF THE ROYAL ACADEMY OF ARTS.

A GLANCE at the exhibition which will be opened to the public on Monday next has shown us that, whilst there are perhaps few pictures which are likely to stand very prominently forward in general favour, the average merit is not inferior to that of preceding collections. The portrait of Sir Henry Thompson, by Millais, is a work which is at least fitted to take rank with that of Sir James Paget, by the same painter, which was exhibited a few years since, and with that of Cardinal Newman, which appears in this exhibition. Millais gives us here not only a perfect likeness of the distinguished surgeon, but succeeds with remarkable skill in indicating some of his characteristics—especially his alertness of manner. Such a portrait as this and that of Newman are of great historical interest, and it is to be hoped may one day find their way to a national collection.

There is very little besides of especial medical interest, with which necessarily we are chiefly concerned. Some etchings by Propert and Evershed indicate the direction in which some busy doctors find their most pleasant recreation. There is a bust of the late Professor Rolleston, by A. R. Pinker, which is to be executed in marble for the University Museum, Oxford. Mr. Boehm sends a terra-cotta bust of Professor Huxley, which is in some respects satisfactory as a likeness, but hardly indicates, we think, the power of the distinguished *savant*. There is also a memorial bust, by Armstead, in marble, of the late Dr. Heaton, which is to be placed in the Leeds Infirmary.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on Monday, the Earl of Shaftesbury presented a petition from the inhabitants of Holborn for inquiry into the general working of the Lunacy Laws.

In the House of Commons on Thursday, April 20th, Mr. Thomasson gave notice that in committee on the Navy Estimates, he will move to reduce vote 12 by £13,565 - the expense of carrying out the Contagious Diseases Acts. He has a similar notice on the paper with regard to the Army Estimates. A number of petitions were presented in favour of the Infectious Diseases Notification Bill, and the Union Officers' Superannuation (Ireland) Bill.

On Monday, Alderman Fowler postponed to Friday his question with regard to the dietary of Chester prison.

The order for the second reading of the Vaccination Acts (Compulsory Clauses Repeal) Bill is fixed for Wednesday, June 21st, and the Vivisection Abolition Bill is put down for the following Wednesday. The Contagious Diseases Acts Repeal Bill is on the order-book for Wednesday, July 19th.

Petitions from Leicester and Sevenoaks were presented in favour of amending the Pauper Lunatics' Discharge and Regulation Act (1871).

Coffee Mixtures.

Mr. Gladstone, in the course of his Budget statement, referred to the declining revenue from coffee, and announced that it was intended to permit the importation of mixtures of chicory and coffee, which has hitherto been prohibited, and to make illegal the sale of mixtures of other vegetable matters as coffee, upon which hitherto duty has been received. This change in the law was subsequently formulated in one of the Budget resolutions as follows:—"Resolved, that the duty of excise on vegetable matter grown in the United Kingdom applicable to the uses of chicory or coffee (other than chicory) shall cease to be payable, and the sale or exposure for sale of any such vegetable matter in imitation of, or mixed with, chicory or coffee shall be rendered illegal."

Friendly Societies' Statistics.

Mr. James gave notice that he would ask the Secretary to the Treasury if his attention has been drawn to the statement in the Report of the Registrar of Friendly Societies for 1880, "that the purpose for which the quinquennial returns of sickness and mortality were devised—viz., the collection of statistics on which to base tables for the use of friendly societies—has been, in his judgment, fulfilled"; and whether, as he states further "that the obligation to supply these returns by the societies has been a heavy burden on them," he will consider what steps should be taken to render such returns no longer obligatory.

Armagh Prison Hospital.

Mr. Redmond gave notice that he would ask whether one of the suspects imprisoned in Armagh Gaol, when suffering from an attack of inflammation of the lungs, was removed from the ordinary cell which he inhabited to one fifteen feet by thirteen; that in this cell three other suspects were confined with him for eighteen out of every twenty-four hours; that the cell contained four beds and the furniture necessary for four men, and was used for sleeping and dining in; and whether better provision will be made for hospital patients in Armagh Gaol.

Emigrant Ships.

On Tuesday, Mr. Chamberlain stated to Mr. Moore that the principal shipowners were carrying out the recommendations of the Board of Trade with regard to accommodation for emigrants, and he did not think legislation was required. —Mr. Moore said that he considered this answer unsatisfactory, and would at an early date call attention to a telegram from New York that a number of emigrants had died on their way thither, the surgeon stating that they had been embarked in a very weak state of health.

The Scotch Medical Grants.

Lord F. Cavendish announced to Mr. Ramsay that the grant in aid of medical relief in Scotland would be increased from £10,000 to £20,000. The Government had hoped to deal generally with the question of medical grants, but found themselves at present unable to do so.

Kingsland Green.

Mr. Torrens gave notice that he will ask the chairman of the Metropolitan Board of Works whether, notwithstanding the earnest deprecation of the overcrowded inhabitants of the neighbourhood of Kingland Green, which has long been an open space conducive to the health of the district, it is now being gradually covered with buildings.

Vivisection.

A considerable number of petitions against vivisection were presented. On the motion of Mr. Hibbert, in the absence of Mr. J. Pease, the annual return was ordered of copy of report from inspectors, showing the number of experiments performed on living animals during the year 1881 under licences granted under the Act 39 and 40 Vic., c. 77, distinguishing painless experiments from painful experiments (in continuation of Parliamentary papers, No. 125 of Session 1880, and 293 of Session 1881).

Lunatic Asylums.

At the evening sitting on Tuesday, three hours and a half were occupied by the discussion of Mr. Stanley Leighton's resolution in regard to the Lunacy Laws. The debate, however, was prolonged, partly for the purpose of preventing the next

resolution on the paper—the Deceased Wife's Sister question—from being reached; and as soon as half-past twelve o'clock arrived, when the subject could not be taken, an attempt was made to "count" the House. This was unsuccessful, and Mr. Stanley Leighton was enabled to go to a division. He called attention to the impropriety and danger of permitting private persons to make pecuniary profit by keeping in their custody lunatics of the wealthier classes, and to the unfairness of requiring the ratepayers to maintain lunatics of the middle and lower classes; and moved, "That all lunatics ought to be committed to the keeping of the State." The motion was rejected by a majority of 47.

A petition from London was presented in favour of an inquiry into the management of the Metropolitan Asylums Board.

Smallpox at Sheffield.

On Wednesday, Mr. W. Lowther gave notice that on Monday he will ask the President of the Local Government Board whether it is true that the resident surgeon, one of the nurses, and the cook, at a lately erected small-pox and fever hospital at Sheffield, were attacked by small-pox; and whether he has any information that these officials were vaccinated before entering on their duties.

A Workhouse Pig.

Mr. Lowther also gave notice that he would ask whether three members of the Board of Guardians at Oldham lately bought the carcase of a pig which the medical officer had ordered to be killed and burned; whether the carcase of the pig was sold to a butcher for 25*s.* by these three guardians; whether, on the facts becoming known, the money was handed over to the master of the workhouse; and whether those three gentlemen continue to act as guardians.

Medical Men and the Carriage Duties.

On Thursday, Mr. H. Samuelson had a notice upon the paper, that he would ask the Chancellor of the Exchequer whether he will exempt from increased taxation under his Budget proposals carriages used by duly accredited medical men in the pursuance of their professional duty. Owing, however, to the absence of Mr. Gladstone, on account of the Royal marriage, the question was postponed.

Correspondence.

"Audi alteram partem."

"EXCISION OF THE ENTIRE TONGUE BY WHITEHEAD'S METHOD."

To the Editor of THE LANCET.

SIR,—I was somewhat surprised to find in to-day's LANCET an article by so experienced a surgeon as Mr. Treves condemning, on what are, I think, very insufficient grounds, the above operation. Having assisted Mr. Whitehead at the hospital and in private practice in upwards of twenty cases of complete excision of the tongue by means of scissors, and having also performed the operation myself, I should like to say a word in its favour, as I believe it only requires to be known in order to become universally adopted. In no case where the disease has been confined to the tongue itself have I seen any approach to hæmorrhage such as Mr. Treves describes; as a general rule, the two lingual arteries are the only vessels that require twisting, and in the majority of cases the amount of blood lost has been very small, certainly considerably less than an ounce. It is only when the floor of the mouth is extensively involved in the disease that I have seen the bleeding cause any trouble, owing to the coats of the vessels being softened and infiltrated, and therefore not readily tied or twisted; but these are the cases in which trouble is occasionally experienced whatever mode of operation is adopted. Mr. Treves in his operation, instead of waiting and checking the hæmorrhage after each successive snip of the scissors either by firm pressure, or, in cases where this does not suffice, by torsion or by ligature (which is one of the important points in the operation, and one on which great stress is laid both by Mr. Whitehead and Mr. Lund in their respective papers), proceeded to divide both lingual arteries (again violating the principle of the operation, for Mr. Whitehead particularly directs to secure each vessel as divided). Can it, then, be wondered at that the hæmorrhage was "terrific," when the two linguals were pumping at once, when blood was flowing "very vigorously" from the cut surface of the floor of the mouth, and when the patient was probably struggling, for he had "a little recovered from the anæsthetic"? Then, again, the condition of the patient's vessels was surely very abnormal, for Mr. Treves says, "The floor of the mouth, and indeed the under surface of the tongue itself, were free from implication in the disease"; the incision therefore would be carried through healthy tissue, yet "the brittleness of the lingual arteries and the softness of the structures adjacent to them were remarkable; the condition of these parts served to render torsion utterly out of the question, and the ordinary ligature almost impossible." No doubt similar trouble in securing the brittle vessels would have been incurred in an operation on any other part of the body in the same patient—e.g., an amputation of the leg.

On these grounds therefore—(1) the mode in which the operation was performed (entirely at variance with the Whitehead method, except that it was performed with a pair of scissors); (2) the abnormal and very peculiar condition of the patient's vessels—I think that Mr. Treves' case can hardly be taken as a fair test of the operation, and I feel sure that if he will only give it another trial, following more closely the directions Mr. Whitehead has given, he will very quickly alter his present opinion as to the facilities offered in "removal of the tongue by the Whitehead method."

I am, Sir, your obedient servant,

FRED. A. SOUTHAM, F.R.C.S.,
Assistant-Surgeon to the Manchester Royal Infirmary.

Manchester, April 22nd, 1882.

P.S.—I should have liked Mr. Treves to have been present at our hospital this morning, when the entire tongue was removed by Mr. Whitehead according to his usual method. The operation, in which I assisted, was concluded within a space of two minutes, very little blood, certainly less than half an ounce, being lost by the patient; the two linguals, the only vessels requiring torsion, were secured without the slightest trouble.

THE TEACHING OF ANATOMY AND MR. COOPER FORSTER'S RESOLUTION.

To the Editor of THE LANCET.

SIR,—From a statement in your journal of the 22nd inst., I learn that a proposal will be brought before the Council of the Royal College of Surgeons of England to reduce the lectures on anatomy to one course. This seems to me so disastrous and retrograde a step, that I must ask you to publish my protest against its adoption. The impossibility of giving a complete course in one winter session, and the difficulty of lecturing at the same time to junior and senior students, have so forcibly impressed me, that for many years past I have pursued the following plan. I lecture to my junior students, in their first year, on the bones, joints, viscera, &c., whilst in their second year they are compelled to attend a complete and systematic course of topographical anatomy. In this manner, avoiding the necessity to the students of attending the same lecture and listening to the same words a second time, I have been enabled to lay before them and urge on their attention a thorough scheme of human anatomy. This necessarily entails an increased amount of work on my part, but I have been rewarded by marking the diligence and attention of my listeners. I had also thought that it was a system to be commended in the interest of medical education, and I had looked forward to similar changes taking place in the teaching of other medical subjects. You will therefore easily understand why I regard with great regret and some alarm the resolution of my friend Mr. Cooper Forster.

His suggestion of an advanced course of lectures on applied anatomy—medical and surgical—is very valuable, provided that this does not supplant a previous thorough teaching of the science.

I am, Sir, yours very faithfully,

JOHN CURNOW,
Professor of Anatomy in King's College.

George-street, Hanover-square, W., April 25th.

THE LEAP OF AN INSANE PATIENT.

To the Editor of THE LANCET.

SIR,—The following case is I think worthy of being put on record :—

J. S——, male, aged twenty five, had been for four months a patient in the Cumberland and Westmoreland Asylum, and when admitted was labouring under epileptic dementia, and had remained in a stupid, demented state, having fits at short intervals since that time. On March 28th last, when going out for a walk with a party of fellow patients, he suddenly ran off to a building which is in course of completion, and against which the builder had left a ladder. Though closely pursued by an attendant he rapidly ascended the ladder, got on the top of the wall and jumped down; in descending he came against some scaffolding and was half turned round; the height of the wall from which he jumped was thirty-five feet, and he fell on a hard road. Several attendants saw him reach the ground, and unite in saying that he landed in a slanting position, that his toes first touched the ground, then his forehead and hands. I was standing close by, but unfortunately was looking in another direction. The patient was unconscious for a few seconds, then groaned heavily and coughed up two or three mouthfuls of arterial blood. He was at once taken in and examined most carefully. No fracture of any bone was found except the tip of the right external malleolus; his forehead was grazed, his eyes blackened, and he had a few scratches on his hands; his pulse was good, and he seemed not to have received injury of any gravity. In the evening his eyes were much swollen and discoloured, but this gradually passed away, and though kept in bed as a precautionary measure for three weeks after the occurrence, he never has exhibited the slightest sign, as yet, of what must at least have been a very great shock, as he weighed 12 stone 6 pounds a few days before his jump. Mentally he has been much sharper and more intelligent since, and says that he purposely and knowingly jumped down with the intent to kill himself.

The noteworthy points in this case are clear :—1. A fall from a height of thirty-five feet without practically any injury. 2. The uncertainty of mental disease. A quiet, stupid demented epileptic patient suddenly waking up and making a determined attempt at self-injury, and that without apparent change in his mental condition until the moment of his attempt.

I remain, Sir, yours truly,
J. A. CAMPBELL, M.D., F.R.S.E.

Garlands, Carlisle, April 16th, 1882.

"MILITIA SURGEONS: A HARD CASE."

To the Editor of THE LANCET.

SIR,—In concurring with the statement put forward by "A Surgeon-Major in the Militia of Twenty-eight Years' Service," which appears in your issue of the 22nd inst. under the above heading, would you kindly allow me to state my individual case?

In 1855 I was gazetted by the lord-lieutenant of my county as assistant-surgeon, and promoted 1864 to the full surgeoncy, which appointment I held until 1875, in which year I retired, in consequence of being deprived of the greater part of my pay and allowances, resulting in the sweeping changes in the recruiting arrangements then brought into force. Always considering that I would receive a retiring allowance for twenty years' service, I applied to the Secretary of State for War for the same, but received in reply an official communication stating, "that Mr. Secretary Herbert regretted that he had no funds at his disposal out of which he could award a gratuity." I was then by service one of the oldest medical officers in the militia. Some time after this occurrence Mr. Secretary Cardwell stated in the House of Commons, on the discussion of the recruiting question, that the services of the militia medical officers of long standing would be well and fairly considered, but this promise was soon forgotten. The permission of being allowed to wear the uniform of my regiment on my retirement is a myth when the wherewithal is withheld on which to hang it.

I am, Sir, yours truly,
April 24th, 1882. ILLUD STUDE QUOD JUSTUM EST.

IRELAND.

(*From our own Correspondent.*)

OF the twenty-one Fellowships allocated by the Senate of the Royal University, twelve have been bestowed upon gentlemen connected with the Queen's University, and of the examiners, five hold chairs in the Queen's Colleges; so it will be seen that the claims of the late university for representation have not been neglected. There are eight other Fellowships, principally medical, to be allotted, but the election for them has ostensibly been postponed for some months, and will probably depend on the funds at the disposal of the new university.

On Tuesday next the Council of the Royal College of Surgeons will make their annual appointments for examiners. There will be eight examiners for Fellowship and letters testimonial, one in ophthalmic surgery, three for the diploma in midwifery, and a similar number to examine students in general education. The election for president, vice-president, secretary, and council, for the ensuing year, will take place early in June. Mr. Barton will be promoted to the presidency, and for the vice-presidency, which he vacates, there are two candidates—viz., Mr. Stokes of the Richmond Hospital, and Professor of Surgery to the College, and Mr. Wheeler of the City of Dublin Hospital. Both gentlemen will have a large number of supporters, but it is expected that the senior of the two on the Council will be returned. The new scheme of the College has received the sanction of the Government, and will probably come into force next October. It is feared that it will not have a beneficial effect on the income of the College, and the rivalry of the new university, where a very much cheaper degree can be obtained, must add to this disadvantage.

By a resolution of the Corporation of Dublin of Sept. 19th last, it was determined that Dr. Cameron, medical superintendent officer of health and executive sanitary officer, in consideration of devoting his entire attention, should receive an annual income of £1000. The understanding was that the Government should contribute £500 of the amount, but the Local Government Board having refused to sanction the arrangement, the matter came before the Town Council last Monday. After some discussion a resolution was adopted to the effect that the Public Health Committee be directed to carry out the resolution of the Council of last September, and that members of the Council who had seats in Parliament be requested to draw the attention of the House of Commons to the refusal of the Local Government Board to recoup £350 of the salary to be paid to Dr. Cameron, notwithstanding that the Solicitor-General had given his opinion that the emolument was a just and fair one. The services of Dr. Cameron have been most valuable, and since his appointment the sanitary condition of the city of Dublin has been greatly improved; so that it would be a matter of regret if, after he had complied with the conditions of the contract entered into, he should be treated in a niggardly manner.

The Membership of the College of Physicians, strange to say, is not a registrable qualification, but steps are being taken by the College to introduce a clause so as to have this defect remedied without delay.

Two men died in Waterford Hospital last week from the effects of alcoholic poisoning. The circumstances were somewhat remarkable. It appears that three empty casks, which had recently contained new whisky, were placed on the quay, and attracted the attention of some labourers. Boiling water having been introduced, and the casks well shaken, so as to extract the spirit, the contents were so liberally partaken of that some dozen men fell insensible, and were removed to the police station. Medical assistance was obtained, and they were transferred to hospital, where the stomach-pump was applied and other remedies used, but, in spite of all efforts, in two cases a fatal result ensued.

Dublin, April 25th.

PARIS.

(*From our Paris Correspondent.*)

THE water scare of last year in Paris threatens to be renewed this year also, as the arrangements for a sufficient supply of this, one of the great necessaries of life, are very defective. It will be remembered how Paris suffered last

summer from a scarcity of water, and how in certain districts the distribution of potable water was suspended, and the watering of the streets interrupted in consequence, and just at the hottest time of the year. It is anticipated that this year the situation will be still worse, as no arrangements have been made to prevent the water-supply running short. The occurrence of this event is almost inevitable, and, I am afraid, irremediable, at any rate for this year, owing to natural causes which no human power could control. The winter of 1880 had been very dry, consequently the springs which supply the Dhuis and the Vannes, two small rivers from which the bulk of drinking-water of Paris is derived, yielded a volume of water far inferior to that of previous years. But that of 1881–2 was a period of exceptional drought, and the reservoirs of Montrouge and Menilmontant ran short. The yield of Vannes and the Dhuis is diminishing daily, and in a few months will be reduced almost to nothing. No change of weather, no series of rains, could now prevent that decrease. The drought does not seem to be confined to the basin of the Seine, but is, unfortunately, general. According to the newspapers, it is in the east of France that the situation is very disquieting. But if potable water is scarce in Paris, ample arrangements are made for the watering of the streets. To remedy the scarcity of water for drinking purposes a series of measures are in contemplation, and the Municipal Council has already authorised the further construction of waterworks which will add 80,000 tons daily to the 400,000 tons the city of Paris already disposes of. Those works will not be ready in less than a year. Others are in preparation, but it will be long before Paris possesses a water service complete enough to provide for the public requirements in dry seasons. In this, as in drainage and other sanitary matters, the French have yet a great deal to learn. As for their hospital arrangements, they are notoriously defective, and, as pointed out in my letter of the 8th inst., there are no special hospitals for the treatment of small-pox or other infectious diseases. Not only are there no special hospitals, but there is not even a separate ward for these cases at general hospitals, and the patients are mixed up together. There is nothing new in these facts; they have often been exposed, strange to say, not in the French papers, but in THE LANCET and other British medical journals. They cannot, however, be too often exposed, and if I revert to them here it is because I happen to know a case in point. An English lady residing in Paris had a daughter aged about twelve, who was lately affected with a slight attack of measles, or what the French term "roséole." Suspecting it to be a case of scarlet fever, the lady was advised to have her daughter removed to the children's hospital at once, where she got admission. The lady, of course, expected that her child would be put into a ward set apart for such affections, but to her horror she learned that she had her bed between two diphtheritic patients, one of whom died the next day and the other was dying. The lady, who was once connected with sick nursing in one of the London hospitals, was much struck by the difference between the hospitals of the two greatest cities in the world, those of the London hospitals being in every respect far superior to those in Paris. Her daughter was only five days in the hospital, and during that time there were five deaths from diphtheria in her ward, and as she expressed her fears about the exposure of her child to that affection, the physician advised her to take her home. The Director of Public Assistance, who has control over the hospitals, would do well to attend more to the improvement of the sanitary condition of the hospitals than to waste his time with such considerations as their "laicisation." You are aware that this process is being applied to all the public institutions in this country, and the hospitals would of course not be allowed to escape. The Pitié and Saint Antoine hospitals were the first to submit to the change last year—that is, the replacing the sisters of charity by lay sick nurses,—when about a hundred hospital physicians and surgeons strongly protested against the measure as being uncalled for, impolitic, and prejudicial to the interests of the patients. No notice was taken of this official protest, and now the Tenon and Lourcine hospitals are to undergo the change. I am not aware whether another official protest has been made, but a letter signed by Dr. Desprès appears in the *Gazette des Hôpitaux*, deprecating in strong terms the adoption of such measures without any reference to or consulting the hospital physicians and surgeons, who are undoubtedly more competent to give an opinion on such matters than the Director of Public Assistance, who is not a medical man.

The annual banquet of hospital "internes," past and present, came off with great *éclat* on Saturday, the 15th inst. It was presided over by Professor Hardy, who had on his right the celebrated Ricord. In his toast, Professor Hardy pointed out the excellence of such an institution as the "internat," the great service it has rendered, and the distinguished men it has produced, some of whom had even become illustrious in the profession: among whom may be named Ricord, Bouillaud, and Littré. He paida graceful tribute to the memory of the two last-named, and of those who died during the year, and expressed a hope that Ricord, who boasts of being more than an octogenarian, would live to honour by his presence many more annual banquets of the kind, and thus prove himself a living example for the emulation of present and future internes.

Dr. Ollier, the well-known surgeon of Lyons, who has distinguished himself by his researches on the osteogenetic properties of the periosteum, read a paper before the Academy of Sciences on a mode of operation which would prevent amputation of the hand or of the foot in cases of gunshot wounds, comminuted fractures, suppurative osteitis, &c. The removal of the carpal bones, and of the inferior portion of the ulna and radius, as performed by Dr. Ollier, is followed by regeneration of the bone, which, if not complete or perfect, is at least sufficient for certain movements.

An ethnographical museum has been opened at the Trocadero, but for the present the public are admitted to the American section only, which contains articles of the highest interest. The remaining sections will soon be completed, and it is anticipated that the museum will be the finest in the world. Dr. Hamy, a distinguished anthropologist, is the director of the new museum.

I have already referred to the frequency of homicides and suicides in Paris lately. The latter are by far the more frequent, and are almost of daily occurrence. On a single day of last week—on the 21st instant—I counted no less than seven in the police reports.

Paris, April 25th, 1882.

Obituary.

CHARLES ROBERT DARWIN, F.R.S.

CHARLES ROBERT DARWIN was the grandson of the well-known Erasmus Darwin, the author of the Botanic Garden and Phytologia, and the son of Dr. Darwin, who was a physician at Shrewsbury. His mother was a daughter of Josiah Wedgwood. He was born on February 12th, 1809, and died April 19th, 1882. He was educated at Shrewsbury Grammar School under Dr. Butler, who was afterwards the Bishop of Lichfield, and being intended for the medical profession, was sent to Edinburgh in 1825, where his grandfather had been educated and took his degree. At the close of 1826, after spending two sessions at Edinburgh, where he had the opportunity of studying marine zoology, he read before the Plinian Society—which was a student's debating club—a paper on the Ova of Flustra, showing the direction of his studies. About this period he became possessed of considerable property, and his intention of pursuing medicine was abandoned. He then went to Cambridge, and was entered on the books of Christ's College, where he graduated in 1831 and proceeded to M.A. in 1837. Long after, in 1877, the University tardily and with some misgiving conferred upon him the honorary degree of LL.D.

Darwin's first scientific work was done between the years 1831 and 1836 on board H.M.S. *Beagle*, to which ship he had been appointed Naturalist. The *Beagle*, a ten-gun brig, was commanded by the Hon. Captain Fitzroy, who subsequently became the head of the meteorological department, and Darwin joined the expedition in consequence of a wish expressed by Captain Fitzroy to have some scientific person on board, accompanied by an offer from him to give up part of his own accommodation. The general history of the voyage, with a sketch of such observations in natural

history and zoology as he thought likely to possess interest for the non-scientific reader, was contained in a work entitled "Journal of Researches with the Natural History and Geology of the Countries visited during the Voyage of H.M.S. *Beagle* round the World." The Journal is very freshly and pleasantly written. It is full of anecdotes and observations on the habits of animals of all species: ants, wasps, beetles, spiders, fish, reptiles, birds, and quadrupeds. Nothing appears to pass unnoticed, and the characters of the inhabitants of the then strange and almost unknown regions visited by the *Beagle* were not, of course, overlooked. The work also contains descriptions of earthquakes and volcanic eruptions, icebergs, accounts of storms, and many interesting geological facts. It is a book which can be taken up at any moment and opened at any page with the certainty of finding something to instruct and amuse. The zoological and other collections brought home from the cruise, the cost of collecting which was largely, and indeed almost exclusively, defrayed by Mr. Darwin, were immense. The scientific results of the voyage rapidly appeared in a series of monographs, which were edited by Mr. Darwin. Professor Owen described the Fossil Mammalia, Mr. Waterhouse the Living Mammalia, Mr. Gould the Birds, the Rev. L. Jenyns the Fish, and Mr. Bell the Reptiles. Darwin himself published separate memoirs on the Structure and Distribution of Coral Reefs, on the Volcanic Islands Visited during the Voyage, and on the Geology of South America. Two memoirs besides were published in the Geological Transactions on the Erratic Boulders and Volcanic Phenomena of South America. Large collections of insects and of plants still remained, and these were distributed amongst his friends, Waterhouse, Walker, Newman, and White, and Professors Hooker, Henslow, and Berkeley. There can be no doubt that the observations made during this voyage were the first foundations and shapings in his mind of the doctrines that were long subsequently published. In 1851 he presented a monograph to the Palæontographical Society on Fossil Lepadidæ, and in 1854 another monograph on the Fossil Balanidæ and Verrucidæ of Great Britain. In 1851 he published under the auspices of the Ray Society a monograph of the subclass Cirripedia with figures of all the species. The first volume was devoted to the consideration of the Lepadidæ or Pedunculated Cirripedes. The second volume, published in 1854, was occupied with the living Balanidæ and Verrucidæ. Both works abound with novel anatomical observations, but are especially interesting from his discovery of the rudimentary males of these animals, which had been previously overlooked. In the composition of these varied works Mr. Darwin had been gradually led to form a new conception of the relations of the present to the past inhabitants of the earth and the origin of species; but with characteristic caution had not ventured to publish his views till they had been thoroughly thought out and were supported by observation and reason. In 1858, however, Mr. Alfred R. Wallace, then exploring the Malay Islands, sent home a paper giving his views on the origin of species. These were so similar to those which were known to be held by Mr. Darwin that Sir Charles Lyell and Dr. Hooker prevailed on him to permit his manuscript to be read before the Linnæan Society on the same night as Mr. Wallace's memoir. Both papers were accordingly read on July 1st, 1858, which may be regarded as the date of birth of the Darwinian theory, though Mr. Darwin's work on the origin of species did not appear till the winter of 1859. Mr. Wallace almost immediately withdrew his claim to the merit of instituting the new doctrine, and handsomely left the field in the possession of Mr. Darwin.

It cannot be denied that some gropings in the path which Darwin made a beaten road are discoverable in writers before his time. Buffon and Lamarck, Geoffroy St. Hilaire, Monboddo, Wells, and Grant, with several others, had advanced theories more or less supported by facts, which failed however, from one cause or another, to satisfy scientific workers. The variation of species, their gradual improvement and degeneration, had not escaped Buffon. He even went so far as to observe that the two hundred species of which he had given the history were reducible to a small number of families or principal phyta or stocks, from which he thought it not impossible all the others might have proceeded. Lamarck, also, maintained the doctrine of continuity both in the animal and vegetable kingdoms. He, too, occupied as he was chiefly with the consideration of the lower forms of animal life, observed their disposition to vary, and that there was a tendency for such variation to become transmitted to the offspring. He laid down the law of adaptation or correlative variation of organs which was elaborated by Cuvier, and expressed the fact that the development of organs and their functional activity were in relation to their employment; and however his views may have been misrepresented by some of his successors, they bear a striking similarity to those of Darwin.

In 1844 a work was published which may be regarded as the immediate precursor of Darwin's "Origin of Species," the "Vestiges of Creation." This work, as Darwin himself acknowledges, from its powerful and brilliant style, did excellent service in this country in calling attention to the subject of which it treated, in removing prejudice, and in preparing the ground for analogous views. It was felt, however, to be weak in argument, to be inaccurate, and to exhibit a great want of scientific caution.

The appearance of the "Origin of Species" was felt at once by everyone engaged in scientific pursuits to be a solid piece of work, to contain the fruits of a vast amount of labour, illuminated by a vivid imagination. It everywhere excited intense interest, was vehemently opposed by the clergy generally and by metaphysicians, but was warmly supported by the leading biologists of this country. The first edition was rapidly exhausted, and a second appeared with but slight corrections, but the critical notices and more matured consideration of points open to attack led to large alterations and extension in the third and fourth editions. The work was translated into German, French, Italian, Dutch, and Russian, and immediately received the support of many illustrious foreigners. Virchow and Vogt in Germany, Schiff and Moleschott in Italy, Mantegazza, D'Omalius, D'Halloy, Quatrefages, Broca, and Royer in France, all welcomed it with enthusiasm, and the author in his quiet home at Down in Kent, suddenly found that he had gained with unprecedented rapidity world-wide fame and reputation.

The main points insisted on in the "Origin of Species" is that all animals are so prolific that, unless checked, their progeny would soon overrun the world. But every animal has a struggle for existence. If it be strong and well adapted for the conditions surrounding it, it is permanent; if weak or ill-adapted, it perishes. Further, every animal has a capacity of variation—some more, some less. If such variation gives it an advantage over its fellows or its neighbours, it will tend to its preservation; and there is a disposition to propagate such modification of form or structure to the offspring—that is to say, there is a survival of the fittest. The change is often very slight; but it gradually tends, if really advantageous to the animal, to become more and more marked in successive generations; and at length a form results which is so far distinct from the original stock as to merit the name of a new species. Domesticated animals, as a rule, are more variable than wild; but this is only because natural selection tends to fix the type according to local conditions, and individual divergences are soon lost, whilst artificial selection abolishes the struggle for existence and permits new and remarkable forms to be preserved.

The "Origin of Species" gave rise to an extraordinary quantity of writing and discussion. An ingenious German, named Sprengel, published in 1872 a list of about 300 treatises or memoirs that discussed the subject of evolution at greater or less length, and it may certainly be said that an equal number have appeared since that date. As a rule the works against it took up more or less of a religious tone, and were correspondingly weak in argument. The most powerful was undoubtedly that of Mr. St. George Mivart, which in fact led Darwin himself to reconsider some parts of his theory.

In the introduction to the "Origin of Species," Mr. Darwin observes that it is only an abstract, that it is imperfect, and that several more years would be required to complete it, and that he felt the necessity of hereafter publishing in detail all the facts, with references, on which his conclusions had been grounded. The several volumes which he subsequently published, redeemed this promise. The "Fertilisation of Orchids" was published in 1862, in which the remarkable contrivances for securing the application of pollen to the stigma in this remarkable order were studied with a minuteness and care that left nothing to be desired.

In 1868 he published "The Variations of Animals and Plants under Domestication," which contained a surprising number of facts bearing on this subject, and showing in detail the changes in form and structure undergone by

animals and plants under changed conditions of life, the influence of heredity, the advantages of crossing, and the laws to which variation is regulated. In accordance with the views maintained by him in this work and elsewhere he came to the conclusion not only that the various domestic races, but the most distinct genera and orders, within the same great class—for instance, mammals, birds, reptiles, and fishes—are all the descendants of one common progenitor, and that the whole vast amount of difference between these forms must have primarily arisen from simple variation.

The curious manner in which Erasmus Darwin anticipated the views of his grandson on this point is shown in the following quotation:—"Would it be too bold to imagine that in the great length of time since the earth began to exist, perhaps millions of ages before the commencement of the history of mankind—would it be too bold to imagine that all warm-blooded animals have arisen from one living filament, which the great First Cause endued with animality, with the power of acquiring new parts, attended by new propensities, directed by irritations, sensations, volitions, and associations, and thus possessing the faculty of continuing to improve by its own inherent activity, and of delivering down these improvements by generation to its posterity, world without end?"

The "Descent of Man, and Selection in relation to Sex" appeared in 1871, and produced a profound impression; for the name of the author and the interest of the subject procured for it attention from a class of readers that might not otherwise have cared to attack it. This work was drawn up with great skill. The general similarity of structure and of embryonic development between animals and man was insisted on, their mental powers were compared, and it was shown how many instincts and faculties—as curiosity, imitation, attention, memory, reason, capability of progression, of improvement, and the like, were common to both. The variability of man himself was then considered, and the action of the conditions of life on his bodily and mental powers. The great influence of sexual selection was demonstrated, and the importance of rudimentary and reversionary character was particularly insisted on. The general conclusion at which he arrived was that man is descended from some less highly organised form; and that conclusion, he was of opinion, was so strongly supported by the facts and arguments he adduced that it would never be shaken. The book excited violent controversy, the echoes of which have scarcely yet died away.

It is not surprising that the new views met with opposition. In the preface to the last-named work, Darwin, after quoting with manifest satisfaction the statement made by Vogt, to the effect that no one in Europe now maintained the independent creation of species, was obliged to admit that of the older and honoured chiefs in natural science many were unfortunately opposed to evolution in every form. Nor did the contents of this work tend to diminish the opposition which he felt existed. The idea that man is descended from a lower form of animal, that he was even to be regarded as cognate with animals at all, was so repulsive to the minds of those who had been brought up in the religious notions of the day and without any knowledge of the anatomy and physiology of the human body, that it was repudiated with scorn, treated as a subject for ridicule, not as one to be gravely discussed, or was referred to with quiet contempt as one of the absurdities of science. The prodigious differences between man and animals in regard to their intellectual, and more especially in regard to their moral attributes, constituted the staple of the arguments adduced by his opponents; and it was impossible to convince them that, if man be regarded as having risen from the lower members of the organic scale, reasonable hope is afforded that he has a still higher destiny before him in the future.

The "Expression of the Emotions" followed in 1872, in which it was attempted to be shown that all the chief gestures and expressions of emotion exhibited by man are the same throughout the world, which afforded a new argument in favour of the several races being descended from a single parent stock, and further that these expressions resembled in many important particulars the movements and gestures of animals.

The works subsequently issued were—the "Movements and Habits of Climbing Plants," which first appeared in the Journal of the Linnæan Society published in 1865, but was reproduced in an extended form as a separate treatise in 1875; the "Insectivorous Plants," published in the same year; the "Effects of Cross and Self-Fertilisation in the Vegetable Kingdom," published in 1876; the "Different Forms of Flowers on Plants of the same Species," published in 1877; the "Powers of Movement in Plants," published in 1880, in which Mr. Darwin acknowledged the assistance of his son Francis; and lastly, the treatise which has been recently noticed in these columns, on the "Formation of Vegetable Mould through the Action of Worms, with Observations of their Habits," published in 1881. These one and all bear witness to the indefatigable industry, the varied attainments and objects of inquiry, and the habits of exact observation to which he had trained himself, and were all directly associated by their line of inquiry with the Origin of Species.

Mr. Darwin leaves a widow with a family of five sons and two daughters. He had long resided at Down, in Beckenham, Kent. His health was greatly impaired by the frequent sea-sickness and privation from which he suffered during his service on board the *Beagle*; and he was compelled to spend many hours of the day on his couch at perfect rest. His death appeared to be referable to some cardiac affection. He was buried in Westminster Abbey on the 26th inst., amidst the regrets of many friends.

FIFE JAMIESON, M.A., M.B.

MANY present and former students of Aberdeen University will hear with great regret of the death of Mr. Fife Jamieson, Demonstrator of Anatomy in the University. Mr. Jamieson was at his work till the end of the winter session, but had suffered for some weeks from dyspepsia, followed by jaundice, the result apparently of catarrhal duodenitis. At the close of the winter session, on April 1st, he had repaired to the milder climate of Forres, to recruit for the summer session, where, however, though able to take exercise, he rather lost strength, and resolved to return home. He left Forres, apparently not worse, on the forenoon of the 15th, and on his reaching Aberdeen, after a six hours' journey on the rail, he was found to have passed into an unconscious condition, in which he continued till the morning of the 18th, when he sank. Although there had been no recognisable change in the liver during the accession of the jaundice, the condition of acute atrophy appeared at last to have supervened from the greatly diminished area of the hepatic dulness which was recognised. Mr. Fife Jamieson's career at the University, beginning twelve years ago, had been one of continued work and distinction. After taking his degree in Arts, in 1873, he went at first into electrical work at Woolwich, with Dr. Siemens, and during two years he took part in more than one expedition for laying submarine cables between this country and America. The work at Woolwich not agreeing with his health, he threw it up, notwithstanding the prospect which it offered, and returned to Aberdeen in 1876 to study medicine. Into this he entered with ardour, and concluded a distinguished career as a student by graduating with honours in 1880. Having distinguished himself particularly in the anatomy class, he was selected by Professor Struthers for the position of Demonstrator of Anatomy, to the duties of which, during the last two years, he had given his entire time, working enthusiastically with the students in all the branches of anatomy. By his death the Aberdeen School loses a most able and rising teacher, and one whose upright character endeared him to all who knew him. He was the son of the Rev. George Jamieson, of the Cathedral, Old Aberdeen. The funeral took place at Old Aberdeen on the 22nd inst., and was attended by the Principal and Professors of the University, and by a large concourse of students and friends.

UNIVERSITY OF EDINBURGH.—The following degrees were conferred on April 21st:—M.D.: Thomas Nicholas German Te Water (B.A. Cape of Good Hope).—M.B. and C.M.: John Macpherson, Scotland; David Robertson Dobie, Scotland.—C.M.: Archibald Campbell Munro, M.B., Scotland.—D.Sc. (in the Department of Public Health): Robert Charnley Smith, M.D., B.Sc.—B.Sc. (in the Department of Public Health): D. M. Cassidy, M.D.; Robert Moodie, M.D.; A. C. Munro, M.B.; Henry Welch, M.B.; C. H. Willey, M.B.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON. — On the 27th inst. the following Members were elected Fellows of the College:—

Glynn, Thomas Robinson, M.D. Lond., Liverpool.
Bowles, Robert Leamon, M.D. Brussels, Folkestone.
Leech, Daniel John, M.D. Lond., Manchester.
Champneys, Francis Henry, M.B. Oxon., Gt. Cumberland-place.
Ross, James, M.D. Aberd., Manchester.
Duncan, James Matthews, M.D. Aberd., Brook-street.

This list is a smaller one than usual, and contains also a larger proportion of provincial physicians.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — The following gentlemen, having passed the required examination for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 20th inst.:—

Dunn, Louis Albert, L.S.A., Brighton.
Sutton, John Bland, L.R.C.P. Lond., Canonbury-square.

Of the 60 candidates examined on the 18th, 19th, and 20th inst., 32 passed to the satisfaction of the Court and obtained their diplomas; 7 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 21 failed to reach the required standard, and were referred for six months' further professional study. Ten candidates who had passed in Surgery at previous examinations, having subsequently obtained a Medical qualification recognised by the College, were also admitted Members.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

William Windley, Thomas Brushfield, Herbert Nicholls, Frederick W. Stericker, and P. C. Scott, Cambridge; Frank Rothera, Charles W. M. Grier, Donald Paterson, Gustave P. Nicolet, and George Mackay, Edinburgh; Michael A. Ottley, George de J. Patterson, and George Cowan, Dublin; Oliver Scattergood and Thomas W. Caudall, Leeds School of Medicine; Joseph G. G. Corkhill, Thomas G. Laslett, and Frank H. Barends, Liverpool; Henri J. Capron, Arthur N. Little, Frank J. Wethered, Patrick W. Williams, and Frederick Morton, Bristol; S. L. Deeble, University College; Joseph A. Moon, Glasgow; Horace Jefferies and George H. Melson, Birmingham; Thos. H. Fisher, George H. Carrington, and Andrew M. Paterson, Owens College; R. E. Geege and Sidney C. E. Wright, Westminster Hospital; David Milligan, Frank J. Mackinnon, A. O. Ward, Thomas K. Dalziel, and George S. Cardew, Edinburgh; Robert W. Green, Leeds; Herbert Mickle, Toronto; Samuel C. Jones and Campbell Williams, University College; William T. H. Spicer, Cambridge and St. Bartholomew's Hospital; Charles P. Walker, C. F. Wakefield, and Samuel H. Agar, Guy's Hospital; Thomas G. Davy, St. Bartholomew's Hospital.

[In the list published last week of candidates who passed the Primary Examination on the 13th inst., the name of Ernest W. Phillips, student of Guy's Hospital, was inadvertently omitted.]

UNIVERSITY OF ST. ANDREWS. — The following registered medical practitioners, having passed the required examinations, had the Degree of M.D. conferred upon them on the 22nd inst.:—

Bowles, Robert Leamon, M.D. Brussels, M.R.C.S., L.S.A. Lond., M.R.C.P. Lond., Folkestone.
Gover, Robt. Mundy, M.R.C.S., L.S.A., M.R.C.P. Lond., London.
Jacques, Edwin, M.R.C.S., London.
Jenner, William, M.R.C.S., L.S.A. Lond., Baldock, Herts.
Johnson, Thos. Sears, M.R.C.S., L.R.C.P. Ed., Canterbury.
Masters, William Hooper, M.R.C.S., L.S.A. Lond., Thrapstone, Northampton.
Moffat, Robert Maxwell, M.B., C.M. St. And., Manchester.
Roberts, Griffith Williams, L.R.C.P. Ed., L.F.P.S.G., L.S.A. Lond., Denbigh.
Sutton, Henry Grant, M.R.C.S., L.S.A. Lond., Sittingbourne, Kent.
Woodman, John, F.R.C.S. Eng., L.S.A. Lond., Southernhay, Exeter.
Wynne, John Kendrick, M.R.C.S., L.S.A. Lond., Eccleshall, Staffs.

At the same time the following gentlemen had the Degrees of M.B. and C.M. conferred upon them, after examination:—

Bowie, Alexander, L.R.C.P. & S. Ed., Edinburgh.
Redpath, Robt. Knox Wighton, L.R.C.P. & S. Ed., Edinburgh.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 20th inst:—

Davies, John Charles, Rhosllanerchrugog, Ruabon.
Goodsall, John Kenaz, Burton Joyce, Nottingham.
Lovegrove, Thomas Ernest, Flaxman-road, Brixton.
Williams, John Henry, Llanidloes, Montgomeryshire.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Howard Eustace Cree, Middlesex Hospital; George Herbert Leslie, Liverpool Royal Infirmary.

At a Court of Assistants of the Society, held at their Hall, Blackfriars, in the City of London, on the 21st March, 1882, it was resolved unanimously that this Society desire humbly to express to Her Most Gracious Majesty the Queen their feelings of deep indignation at the recent attempt upon her valuable life, and their hearty thanks to Almighty God for her providential deliverance from so great a danger; that the seal of the Society be affixed to this resolution, and that the same be transmitted to Her Majesty's principal Secretary of State for the Home Department.

A FINE of £10 with costs was imposed upon a butcher at Salford last week for selling unsound meat.

THE late Mr. Charles Ford, of Bloomsbury-square, has bequeathed £1000 to the Royal Medical Benevolent College.

AT Salford Borough Court on the 21st inst. a man was fined 40s. and costs for causing his daughter, whilst suffering from small-pox, to be removed in a cab from her home to Wilton Hospital.

THE danger in some cases of the use of the Turkish bath without medical advice was illustrated last week in the case of a man, aged twenty-nine, who died whilst in the hot room. The medical evidence at the inquest showed that the deceased was labouring under softening of the brain.

THE bazaar held at Batley in aid of the funds of the Cottage Hospital seems to have proved a great success. On Easter Monday the sum realised amounted to over £1221. The total proceeds, so far as accounts have been received, reach £2293.

RABIES IN PARIS.—From a report just issued by the official veterinary surgeon, there were last year six hundred and fifteen cases of rabies in the French capital; one hundred and fifty-three persons were bitten, of whom twenty-three died.

ON Monday last, at Clarence House, the Duchess of Edinburgh presented an Honorary Silver Medal which had been awarded to a nurse of the Kent Nursing Institution established at West Malling, Kent, of which Her Royal and Imperial Highness is a patron, in recognition of devoted service in nursing the poor.

ASYLUM FOR IDIOTS, EARLSWOOD.—The thirty-third anniversary festival of this institution was held on the 21st inst. It appears there is a debt of £2000 on the asylum, and that if funds were forthcoming 200 additional inmates could be accommodated. Subscriptions and donations to the amount of £2600 were announced in the course of the evening.

BOLINGBROKE HOUSE PAY HOSPITAL.—It is an evidence of the progress which this important movement is making that the fees paid by the patients for the past six months amount to as much as the payments for the whole of the previous year. Daily application is made at the institution by persons who prefer to enter this "Home in Sickness" to obtaining free treatment at a charitable hospital.

THE LEVEE.—The following members of the medical profession were present at the levée held by the Prince of Wales at St. James's Palace on Monday last:—Drs. M. Baines, Collins, Langdon-Down, Christopher Dresser, Farquharson, Clement Godson, Ligertwood, Lowe, W.S. Playfair, Reid, Henry J. Strong, Maudsley; Mr. White Cooper, Mr. Andrew Duncan, Mr. Spar-hall Willett, Sir H. Thompson, Surgeon-Major Elgee, Surgeon H. M. Ellis, R.N., Surgeon Farmar, Surgeon A. Harding, Surgeon Lloyd Jones, Surgeon Langridge, Surgeon-Major Martin, Surgeon Mosse, Mr. Francis Mason, Surgeon G. S. Somerville, Surgeon H. O. Stuart.

DAVID DUNCAN, M.B., C.M. Aber., L.S.A., has obtained the certificate of proficiency in Sanitary Science in the University of Durham.

THE FARRINGDON GENERAL DISPENSARY.—The Presidency of this old-established institution, which became vacant by the death of Lord Hatherley, has just been accepted by Lord Coleridge. At the annual meeting held last month, it was stated that 32,000 patients had attended the institution during the year, and the medical staff reported that these patients appeared to be of a deserving class, and that they did not believe the charity was in any way imposed upon. On the 30th of last month an amateur dramatic performance in aid of the funds took place at St. George's Hall. A full audience witnessed an exceptionally good representation of "Masks and Faces," and the funds of the institution will receive about £50 profit after the expenses incidental to the performance have been paid.

CHILDREN'S HOSPITAL, BRISTOL.—The annual meeting of the friends of this institution was held on Monday at the Guildhall and was of more than ordinary interest. The Mayor presided, and in his speech set forth the claims of the charity to the sympathy and support of the citizens of Bristol. During the last year some 343 children had been admitted to this hospital, and of this number about 292 were discharged either cured or relieved. The number of deaths during the year had been nine, showing a death-rate of about 2½ per 1000. The number of out-patients, women and children, had been 2531. The most important business transacted was the passing of a resolution recommending the erection of a new building on a site secured on St. Michael's Hill, the cost of which will, it is estimated, be about £14,000, towards which more than £3000 has already been promised.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BARRON, JAMES, M.D., M.Ch. Q.U.I., has been appointed House-Surgeon to the Belfast Royal Hospital, vice Smyth, resigned.

BURMAN, W. MAXWELL, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Wath District of the Rotherham Union.

COLLENETTE, F. DE BEAUCHAMP, L.R.C.P. Lond., M.R.C.S., L.S.A.Lond., Medical Officer of Health, has been appointed Analyst to the Wolstanton and Burslem Rural Sanitary Authority.

CONWAY, THOS. H., L.R.C.P.Ed., L.F.P.S.Glas., L.S.A.Lond., has been appointed Medical Officer to the Wetheral District of the Carlisle Union.

COX, LLEWELYN FREDERICK, M.R.C.S., Assistant Medical Officer, Wilts County Asylum, has been appointed Medical Superintendent of the North Wales Counties' Lunatic Asylum at Denbigh.

DIXEY, HARRY E., M.D., has been appointed Surgeon to the Malvern Rural Hospital, vice Tyrrell, resigned.

FLINT, ARTHUR, L.R.C.P., of Westgate-on-Sea, has been elected Medical Officer to the Rural Sanitary Authority and Joint Hospital Committee of the Board of Guardians of the Isle of Thanet Union.

HARVEY, GEORGE H., M.B., C.M.Aber., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Milton District of the Gravesend and Milton Union.

HITCHCOCK, CHARLES KNIGHT, M.D., M.A.Cantab., has been appointed Resident Clinical Student at Bethlem Royal Hospital, for six months, from May 1st.

HOVELL, T. MARK, F.R.C.S.Ed., has been appointed Assistant Aural Surgeon to the London Hospital.

HUNTLEY, ROBERT ELLIOTT, M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Fourth District of the Hexham Union.

MORRIS, JOHN HENRY, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Fourth District of the Salford Union.

ROWLAND, CHARLES, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse of the Bingham Union.

SAUNDERS, CHARLES EDWARD, M.D., C.M.Aber., M.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Hertfordshire Combined Sanitary Districts.

SILK, J. F. W., M.B.Lond., M.R.C.S., has been appointed House-Physician to the Leeds General Infirmary.

WARD, ALFRED, M.B., C.M.Ed., has been appointed Medical Officer to the Anston District of the Worksop Union.

WHITE, J. BRADSHAW, M.D. Q.U.I., M.Ch., has been appointed Medical Officer to the Third District of the Hackney Union.

WINDLE, BERTRAM C. A., A.B., M.B., B.Ch. Univ. Dub., has been appointed Surgical Registrar to the Adelaide Hospital, Peter-street, Dublin.

WOAKES, EDWARD, M.D.Lond., has been appointed Senior Aural Surgeon at the London Hospital.

Births, Marriages, and Deaths.

BIRTHS.

BARKER.—On the 22nd inst., at Harley-street, Cavendish-square, W the wife of Arthur E. Barker, F.R.C.S., of a daughter.

CAMPBELL.—On the 19th inst., at 11, Gordon-place, Campden-hill, W., the wife of Brigade Surgeon A. D. Campbell, late *H.M.'s* Bengal Medical Service, of a daughter.

GLYNN.—On the 15th inst., at Rodney-street, Liverpool, the wife of T. R. Glynn, M.D., of a son.

HUTCHINSON.—On the 17th inst., at Scarborough, the wife of Charles F. Hutchinson, M.D., of a daughter.

KEATES.—On the 17th inst., at Tredegar-villas, East Dulwich, the wife of Wm. Cooper Keates, M.R.C.S., L.R.C.P.Lond., of a son.

KING.—On the 2nd inst., at Madras, the wife of Walter Gawen King, M.B., Acting Assistant Physician, General Hospital, and Professor of Hygiene, Medical College, Madras, of a son.

MILLER.—On the 17th inst., at Horwoods, Basingstoke, the wife of F. D. Miller, L.R.C.P.Lond. &c., of a daughter.

MUIR.—On the 23rd inst., at Cornwall-road, Westbourne-park, the wife of J. C. P. Muir, L.R.C.P., of a daughter.

MARRIAGES.

CRONK—GREGSON.—On the 12th inst., at Christ Church, Highbury, Herbert George Cronk, M.A., M.B.Cantab., fourth son of Edwyn Evans Cronk, of Suffolk-place, Sevenoaks, Kent, to Emily Kate, eldest daughter of Jesse Gregson, of Highbury-hill, N.

DOUGLAS—MACKIE.—On the 20th inst., at St. Luke's, Chelsea, S.W., by the Rev. Gerald Blunt, M.A., Rector of the Parish, Charles Edward Douglas, M.D., of Cupar, Fife, N.B., eldest son of the late Col. Walter Douglas, 21st M.N.I., to Bessie, youngest daughter of the late J. W. Reid Mackie, M.D., of Cupar, Fife, N.B.

FIRTH—MARRIOTT.—On the 13th inst., at Swaffham, Norfolk, Eustace Firth, M.B., C.M., of Debenham, Suffolk, to Ellen Maria, eldest daughter of Robert Buchanan Marriott, Surgeon, of Swaffham.

GUY—COMMINS.—On the 12th inst., at St. Peter and St. Paul's, Charlton, near Dover, Thomas Guy, M.D., Inspector General, Army Hospitals, to Emma Frances Mary, only daughter of the late Rev. Joseph Edyvean Commins, formerly Vicar of North Shoebury and Little Wakering, Essex.

HUSSEY—GRIFFITHS.—On the 19th inst., at Christ Church, Claughton, Birkenhead, Edward Hussey, M.D., of Brighton, to Jane Annie, daughter of Thomas Griffiths, of Silverdale, Oxton.

MCCULLOCH—REED.—On the 19th inst., at St. Mary's, Tenby, James McCulloch, M.R.C.S., of Swansea, to Elizabeth Maria Grace, only child of William Reed, Esq., of Tenby.

SANDWITH—GLASSFORD.—On the 25th inst., at St. Mary Abbot's Church, Kensington, Fleming Mant Sandwith, M.R.C.S., son of Colonel J. W. F. Sandwith, to Annie C. Glassford, only daughter of the late William Glassford, Esq., of Gibraltar.

SMITH—BOND.—On the 23rd ult., at St. Paul's Cathedral, Calcutta, David Boyes Smith, M.D., formerly Principal of the Calcutta Medical College, to Maude Cotterell, eldest daughter of the late Alfred Bond, Esq.

THOMSON—HAYWOOD.—On the 20th inst., at St. Jude's, South Kensington, by the Rev. W. Yalden Thomson (father of the bridegroom), assisted by the Rev. W. Small, George James Crawford Thomson, M.B., M.R.C.S.E., L.S.A., of Frome, Somerset, to Beatrice Evelin, youngest daughter of the late Daniel Haywood, Esq., of The Boltons, South Kensington.

WILLEY—SCOTT.—On the 20th inst., at St. George's, Bickley, by the Very Rev. the Dean of Wells, assisted by the Rev. Arthur G. Heilicar, Vicar of Bromley, and the Rev. Alfred Scott, Curate of St. Giles' (brother of the bride), Henry Willey, M.B., F.R.C.S., of Elmhyrst, Bromley, Kent, to Jessie, third surviving daughter of John Scott, Esq., J.P., of Abbeyfield, Bickley, Kent, and of Wetheral, near Carlisle, Cumberland. No cards.

DEATHS.

BAILY.—On the 27th February, at Robe, S. Australia, Frederic William Baily, M.R.C.S., L.R.C.P.Lond., of Norwood, Adelaide, in his 32nd year.

BRAMWELL.—On the 23rd inst., at 1, Manor-terrace, Tynemouth, John Byrom Bramwell, M.D., aged 59.

ELLIS.—On the 18th inst., at High-street, Bangor, Ellis H. Ellis, L.K.Q.C.P.I., aged 34.

FORREST.—On the 17th inst., at Clare-street, Dublin, J. King Forrest, F.R.C.S.I.

JAMIESON.—On the 18th inst., at the Manse, Old Aberdeen, Fife Jamieson, M.A., M.B., M.Ch., aged 28.

MCMUNN.—On the 20th inst., at the Asylum, Sligo, John McMunn, M.D., Resident Medical Superintendent, aged 66.

SHEPHERD.—On the 22nd inst., at St. George's Lodge, Brighton, George Shepherd, M.D., late of Clifton, aged 63.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, April 27th, 1882.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 21	30·25	S.W.	55	50	..	65	42	..	Bright
" 22	29·68	S.E.	55	51	..	55	50	..	Raining
" 23	29·22	S.E.	54	50	..	61	45	·25	Cloudy
" 24	29·47	W.	54	50	..	61	46	·25	Cloudy
" 25	29·48	W.	52	46	..	55	39	·14	Bright
" 26	29·33	W.	47	43	..	54	37	1·01	Cloudy
" 27	29·75	N.	46	41	..	53	37	..	Bright

Medical Diary for the ensuing Week.

Monday, May 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Annual Meeting.
MEDICAL SOCIETY OF LONDON.—Dr. E. Symes Thompson will deliver the Annual Oration, after which a Conversazione will be held.

Tuesday, May 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Dr. E. B. Tylor, "On History of Customs and Beliefs."
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Cancer of the Sigmoid Flexure; Intestinal Obstruction; Dissection of Nerves, &c., from Addison's Disease; Embolism of Pulmonary Artery; Rupture of Œsophagus; Caries of Sacrum; Tumour from Spinal Cord; Lateral Asymmetry of Bones and Brain; Aneurism of Aorta causing Bilateral Paralysis of Vocal Cords; Disseminated Polypi of Rectum; Ulcerative Endocarditis; Ulceration of Large Intestine; Defects in Valves of Heart, &c.; Œdema of Vocal Cord from Aneurism of Aorta; Suppuration around Kidney, &c.

Wednesday, May 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown.—Dr. W. A. Popow, "On the Corpus Luteum."—Dr. John Williams, "On the Natural History of Dysmenorrhœa."
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. Sonsino (of Cairo), "On Filaria Sanguinis Hominis."

Thursday, May 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Metals."

Friday, May 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor R. Grant, "On the Proper Motions of the Stars."

Saturday, May 6.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. F. Pollock, "On the History of the Science of Politics."

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

BRIGHTON DRAINAGE.

As bearing on the above question, we quote the following extract from a letter by Mr. E. G. Banner, published in the *Builder* of April 1st:—

"The testimonial at page 115 of 'Wholesome Houses' gives the result produced in a sewer 1200 ft. long with one 6-in. Banner cowl. At Montpellier-road, Brighton, a like result has been produced, the sewer there being 2 ft. 8 in. by 2 ft., 500 ft. long, and the satisfactory result worked out has been witnessed by six gentlemen anxiously interested in sanitary science. A like test has also been ordered to be made by the Works Committee of Hove, under the supervision of Mr. E. B. Ellice-Clark, the town surveyor, and a 12-in. sewer, about 1000 ft. long, has been selected for the purpose; in this case, as in the former, all the gratings or 'ventilators' in the streets, except one at the extreme end of the sewer, will be entirely closed, and I am now taking out a patent for a combination by which I shall be able to close that one also."

Constant Reader is thanked for his communication. His facts relative to the injurious effects the present prison dietaries have on the health of prisoners bear out the statements that have been repeatedly expressed in these columns. When a governor of an English gaol can write of the present system as one of "legalised cruelty," it is high time that a public inquiry should be instituted; and we do not doubt that if these gentlemen and the medical officers are encouraged to give an opinion free from the terror of the commissioners the present system will be speedily modified.

E. Bracker.—Our correspondent should write for a copy of the rules and the report of the Northampton Provident Dispensary.

FREEDOM IN SCIENTIFIC RESEARCH.

To the Editor of THE LANCET.

SIR,—The perusal in *The Times* of the obituary notice of the late Chas. R. Darwin, a true philosopher in its fullest sense, and whose whole life has most unselfishly been devoted towards increasing the happiness of humanity, recalled to me the letter of your correspondent, "Veritas," in your number for April 8th, in which he laments the general and steady spread of what he calls scepticism in the scientific literature of the day. Would he wish to roll back this development to the age when witchcraft and its congeners prevailed? Scepticism, the principle he so abhors, was the very means by which this outcome of ignorance and priestly fanaticism was uprooted. Science cannot bend her stubborn facts to the requirements of ancient myths. The earth will revolve round the sun, as declared by poor Galileo, in the face of his inquisitors. Referring again to the great and noble man now laid low, Mr. Darwin, have not anathemas loud and deep been hurled against his works from the pulpit? Has ever science been blessed by the clergy?

I am, Sir, yours, &c.,

April 22nd, 1882. VECTIS.

COMPOUND PRESENTATION.

To the Editor of THE LANCET.

SIR,—The following case, from its rarity, may prove of interest to your readers. I was summoned hastily to Mrs. B——, aged thirty-four, in labour with her second child. She was then seven months advanced in pregnancy. The membranes had ruptured, and this was followed by copious hæmorrhage. There had been but few pains—only sufficient to partially dilate the os. Upon examination, a foot, a hand, and part of the placenta were found presenting. The hæmorrhage persisting, I dilated the os more fully by the aid of my fingers, and succeeded in clearing the presenting foot and bringing it down, after which there was no trouble. The placenta was expelled immediately after the birth of the child by means of "expression." The child was dead, but the mother made a capital recovery.

I am, Sir, your obedient servant,

Midhurst, April 10th, 1882. STENSON HOOKER.

MEETING UNQUALIFIED PRACTITIONERS.

Mr. Thomas Percival maintains that Mr. Grabham's own language in a letter to him virtually admits that Mr. Grabham met his unqualified assistant before the action against him in the county court. After Mr. Grabham's answer to this point we think this controversy might cease.

F.R.C.P. Lond., M.R.C.S., L.S.A. has much reason to complain, but little ground to hope for redress on legal grounds. The fact that his rival is registered enables him to discharge such professional duties, though not to enforce payment for them if challenged in court, as being duties not covered by the nature of the qualification possessed. Our correspondent will be quite justified in asking the members to re-elect him at the end of the year. The unqualified assistant can be proceeded against either under the Apothecaries Act or, if false titles are used, under the Act of 1858.

"ALOPECIA."

To the Editor of THE LANCET.

SIR,—Having several cases of parasitic and non-parasitic alopecia, a few remarks upon them may be interesting to some of your readers. Of these four cases are adults, and three are children whose ages vary from twelve to six. Of the four adults two are recovering the growth of the hair—these are parasitic; two are still losing it—these are rheumatic in origin, and in which I could find no parasite, and have nearly denuded the scalp of hair. One of the children, a girl about twelve years old, has only a small spot about half an inch in diameter left, after the whole scalp was affected with patches, varying from this to two inches in diameter. A boy is in much the same condition, after being in nearly the same state when I first saw him.

When alopecia is due to a vegetable parasite, as I have found some of these cases are, it should not be mistaken for several other kinds of baldness affecting the scalp, such as a common stage of "tinea tonsurans." Simple atrophy of the hair, due to nerve causes, syphilis, lupus, vitiligo, senile baldness, &c., all these causes produce a similar result at certain stages—viz., a patch of denuded hair upon the scalp, of polished ivory-like appearance. As a correspondent remarks, "torula may be found in nearly all the microscopic specimens of alopecia." So it may, but it is distinct from the parasitic form of this disease, described by Anderson, Bazin, and Gully, and which I have endeavoured to show, calling it "epiphyton decalvans," after the synonym used by Professor Sir Erasmus Wilson: "phytosis," a form of vegetable parasite growth, the literal translation of "tinea" being a worm. In the same way we have non-parasitic sycosis and parasite sycosis, an interesting case of which was shown at the Midland Medical Society, and reported last week in the journals. Parasitic alopecia is amenable to treatment more so than that due to causes such as fevers, nervous influences succeeding grief or pain, and acute rheumatism, as was the case in two of my adult patients, in which I found the hair-roots atrophied.

The early symptoms of new hair in these parasitic cases was a light-brown down, sometimes white, appearing at the circumference of the patches, gradually extending to the centre, and each successive growth is darker. The prognosis is, in my experience, generally favourable under a highly stimulating treatment.

Apologising for occupying so much of your valuable space, I am, Sir, your obedient servant,

JAMES STARTIN.

Sackville-street, W., April 12th, 1882.

Mr. A. Oliver (Nova Scotia) should address to the secretary, Burlington House, Piccadilly, London.

Mr. Ikin (Leeds).—The case does not appear to present features needing special comment.

Mr. Rooney (West Kensington).—We have no knowledge of the paper.

TREATMENT OF WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—In your last issue you draw attention to the high death-rate from whooping-cough, and point out that by taking measures to prevent its spread, and careful attention to the improvement of the sanitary conditions under which it exists, a great deal might be done towards stamping it out. While feeling very strongly the truth of this, I think that in the meantime the death-rate might be much reduced by the more general use of croton chloral as a remedy. In my experience its value in whooping-cough is as great as that of salicyate of soda in rheumatism. Many severe cases, in which I have feared a fatal result, have yielded to it in a manner beyond my expectation, and I endorse the good opinions expressed of it by Dr. Ogilvie Will (*Med. Press and Circ.*, May 12th, 1875), Dr. Milson Roberts (THE LANCET, June 23rd, 1877), Mr. Paulson (THE LANCET, Feb. 10th, 1877), and others. Croton chloral is a safe remedy, best given to children in small often-repeated doses, which may be increased from day to day. It may or may not act in whooping-cough by producing a certain degree of anæsthesia of the respiratory centre or of the vagus. Death results from the arrest of the respiratory movements. It is possible that the reason why croton chloral has not come into general use in the treatment of this disease is a fear of administering it to very young children. It is remarkable that text-books on medicine and on therapeutics, amongst them even the recent edition of Ringer's book, omit all reference to the use of croton chloral in this disease.—I am, Sir, your obedient servant,

Gordon-square, W.C., April 24th, 1882. ROBERT WHARRY.

PUFFING FRIENDS.

THERE is one great objection to doing anything unusual in country places, and that is the risk of being made the subject of a newspaper paragraph. Dr. Thomas, of Maesteg, suffers severely in this way at the hands of an injudicious trumpeter in the *Central Glamorgan News*, who not only lauds a lithotomy done as an unprecedented feat, but adds that "this is only one of the many similar and other operations, all of which have been eminently successful." Dr. Thomas will surely say "save me from my friends."

R. J.'s usual medical attendant would probably answer the question.

"SOUTH AFRICA AS A FIELD FOR MEDICAL PRACTICE."

To the Editor of THE LANCET.

SIR,—Adverting to Mr. M'Donagh's letter in THE LANCET of Feb. 4th on the above subject, I should also like to give my experience of the colony. Having been knocking about the Cape ports for two years, I went up country, more with the intention of spending the winter away from England than anything else, and also to gain some further experience of the country. I took a district surgeoncy (a Government appointment, value £75 per annum, and private practice), which had been newly created, and vacant for some little time; therefore nobody had tried it before me. I find my present position to be this: I am within thirty miles of a good little colonial town with three doctors in it, and they are my nearest competitors, if such they can be called. At the lowest computation I reckon that my practice is worth about £50 a month, and I have been here only a few months. I do not consider that my expenses are any heavier than they would be in England. We grow abundance of fruit, such as grapes, figs, peaches, apricots, pomegranates, &c., and cabbages are not 7*s.* 6*d.* apiece. The climate is delightful, although of course very hot in the summer at times. It is true that one has to ride sometimes long distances and over rough roads, but the horses are very easy and surefooted, and you get paid in proportion to the distance, and paid well.

I could add a great deal more, but will not further intrude upon your valuable space, my object being only to do the colony common justice and to show that it is not such a "Sahara" as Mr. M'Donagh describes. I leave your readers to draw their own conclusions from the above unvarnished account, and do not give any advice upon the subject of remaining at home or otherwise.

I am, Sir, yours faithfully,

South Africa, March 15th, 1882. SOUTH AFRICAN SUBSCRIBER.

MEDICAL MEN AND INSURANCE FEES.

To the Editor of THE LANCET.

SIR,—In December last I was asked to examine a man for a large insurance office. On the form sent me there was a marginal note to the effect that the fee would be remitted at the end of the month. When the time came I duly received a guinea. Since then I was requested to report on two others on similar forms. I did so, and was sent, not two guineas, but one guinea. I scored one of the names out of the receipt form sent for my signature, and returned it with a request for the other guinea. The manager replied that their scale of fees was 10*s.* 6*d.* should the policy be under £500, £1 1*s.* if £500 or over £500, adding that this scale had given satisfaction to medical men of the highest standing all over the country. I refused to accept his scale of fees, and repeated my request. No notice was taken of my letter, so I informed him that I should place the matter in the hands of my solicitors were the fee not paid. By return of post I received it.

To me such a scale of fees seems decidedly insulting, as the insurance offices expect the same report whatever the amount of policy; and while they reduce their fees if the policy be small, they do not raise it should it be very large. The remedy I would suggest is that medical men should refuse to report under any such condition as that the amount of the policy regulates the fee. I am, Sir, yours truly,

April 18th, 1882. M.B., C.M.

LONDON NOISES.

To the Editor of THE LANCET.

SIR,—In view of the ever-increasing noises of the London streets, I venture to ask, through your columns, in the interest of those unhappy persons who find it more and more difficult either to sleep well or to work well within the limits of the four-mile radius, why some sort of simple instrument cannot be invented for enabling persons to keep their ears closed (when they wish to do so) in the same way and as effectually as when they apply the tips of their fingers to them? I have tried wool, I have tried the new vulcanite ear-stoppers, but all is useless. Surely it is within the resources of science to solve the difficulty, and to confer on nervous and overworked men and women the inestimable boon of "shutting their ears" as easily as they can shut their eyes.

I am, Sir, yours, &c.,

April 25th, 1882. W. H. M.

"WORTHING AS A HEALTH RESORT."

To the Editor of THE LANCET.

SIR,—I beg to endorse every word in Dr. Goldsmith's letter of the 17th inst. For many years, with patients and my own family, I have known the value of Worthing air; and if only the occasional trouble of the seaweed accumulation in the summer months could be remedied, I venture to think Worthing would be as popular as it certainly is salubrious and charming.—I am, Sir, yours faithfully,

Kensington-square, April 22nd, 1882. JOHN J. MERRIMAN.

TREATMENT OF FUNGOSITIES OF THE BLADDER.

DR. W. F. ATLEE relates, in the *Philadelphia Medical Times*, a case of the above, in which the vesical disease was successfully removed by the finger-nail. The patient was an unmarried woman aged twenty-two, who exhibited the usual symptoms of the malady in an aggravated form. Dilatation was effected by the repeated introduction into the urethra of dressing forceps, which were opened and then withdrawn. The finger was then passed into the bladder, and the fungosities, some of them more than half an inch in length and half a line in thickness, were scraped away. The procedure was followed by complete relief, and so far no recurrence of the disease has ensued.

Mr. T. Lafon (Cashel).—The letter of our correspondent is too long for publication, besides which it refers to a difference in diagnosis in a case of surgery confessedly very difficult. We should advise him to rest satisfied with his own view of the case. The treatment of the consultant did not differ from his, and in free countries and liberal professions there is room in obscure surgical injuries for difference of opinion. But the consultant should have communicated his opinions through the regular adviser and in a cautious manner.

WE are compelled to defer comment on the Swansea case of false certification until next week.

Mr. Farrington.—A sample might be forwarded for analysis.

Darby-the-Blast.—The question should be addressed to the ordinary medical attendant.

Lux is referred to our last issue, page 673.

Dr. John Shortt.—The paper is marked for early insertion.

"HOSPITALS AND THE STATE."

To the Editor of THE LANCET.

SIR,—Mr. Burdett's letter of the 17th inst. deserves and demands a reply, for the point at issue is, as he rightly says, of interest to hospital managers generally, and, he might have added, of still greater interest to those who support hospitals and those who seek relief in them.

My doubt as to the accuracy of the data on which his tables are based refers partly to his method, but still more to the trustworthiness of the materials furnished to him by hospital authorities. It is a matter of notoriety that the records of many of those institutions are so carelessly kept as to be valueless for statistical purposes, that their accounts are not subjected to any reliable audit, and that their entries of disease have no pretension to scientific accuracy.

I have no doubt of the careful, conscientious, and trustworthy manner in which Mr. Burdett himself dealt with the materials at his command. It is difficult to determine what may be regarded as a reasonable amount of space for the publication of such information, for minute and accurate details are the very life of statistics. But unless the publication affords the requisite basis for apportioning to each institution the different items of income and expenditure under their exact heads, and the units to which the figures apply are themselves correct, tables, however carefully constructed, can scarcely convey an accurate estimate of the state of those institutions for positive or comparative purposes. For example: I am by no means sure, even if they are correctly stated by hospital authorities, that the average number of beds occupied, and the average duration of residence afford a sound basis for estimating the cost per head of hospital patients. The most simple and accurate method of determining the daily average number of sick or other persons in a hospital is to take the sum of the numbers daily present, and to divide that sum by the days in the year, and this would certainly give a more trustworthy means for calculating cost, &c.

To furnish correct approximative, comparative estimates, such as are given by Mr. Burdett, requires two separate sets of tables; the one to show the population, movement, and duration of residence or detention in each institution; the other the income and expenditure of each of them. This is so well done in the "Compte Moral de l'Administration de l'Assistance Publique" in Paris, as published for 1875, that it appears to me to be undesirable to go further and fare worse in endeavouring to discover new means of attaining the same end. On these are based the statements contained in M. Husson's "Etude sur les Hôpitaux." The later reports are too exclusively financial.

To these I must refer Mr. Burdett, as I am afraid that to analyse the tables themselves, or to reproduce them in an intelligible form, would occupy more space than you would be disposed to allow or could spare. These tables are arranged in four categories: 1st, population, movement, and duration of residence; 2nd, income and expenditure; 3rd, accounts of the materials and inventories; 4th, an appendix containing various matters not included in the former parts, such as gifts and legacies, acquisition and alienation of landed property, the receipts and expenditure of the Bureau de Bienfaisance, and of the central office of admissions to hospitals in the previous year, dispensaries, nursing, and receipts and expenses for religious purposes, &c. The first two parts are the most important in relation to the great question considered in Mr. Burdett's essay on Hospitals and the State.

Hospital statistics for strictly scientific purposes must be differently constructed, a question which I need not enter upon here, as it is not relevant to the point in discussion.

I am, Sir, yours faithfully,

April 22nd, 1882. THE REVIEWER.

THE GERM THEORY.

THE editor of the *Asylum Journal*, issued from the lunatic asylum for British Guiana, Berbice, under date March 15th of the present year, indulges his readers in this impression with a dissertation on "The Germ Theory of Disease," a subject not long ago consigned to presumed lunatics, but now having its place amongst the most fertile sources of scientific medicine.

A CAUTION.

Messrs. J. B. and A. E. Kennedy (Stratford and Plaistow) are desirous of warning the profession against the attempts at imposition by a man, recently acting as an assistant, who pretends he has lost his purse, and solicits means to return to his situation.

Curaçaoa.—Colonial degrees are not registrable under the Medical Acts. An exception was made in the schedule of the Act of 1858 in favour of doctors of medicine of any foreign or colonial university practising as physicians in the United Kingdom before the first day of October, 1858.

VIVISECTION.

To the Editor of THE LANCET.

SIR,—I cannot forbear saying your observations regarding those opposed to vivisection are much too severe. Why should a man be sneered at and held up to contempt because he conscientiously takes a different view of the subject to what you and others do? Granted, for the sake of argument, that it is necessary to perform operations of an experimental kind on animals, and which are not, as you say, "tenderly" done, but, as we read, of a most cruel and distressing character, such as roasting them alive, boiling and baking them, painting them with turpentine and setting them on fire, crucifying them by nailing their feet to a board, making holes in their skulls and scooping out their brains, and in other instances driving a red hot poker into their brains, can you be surprised if people are to be found who shudder at such proceedings and ask themselves, Can it be possible that such revolting cruelty is really necessary to discover remedial measures for the diseases of mankind? If this be so, sad indeed is the reflection that no other resource exists but that which is so abhorrent to the feelings of every good and upright man. Perhaps an extract from "Gisborne's Duty of Man," vol. ii., fifth edition, p. 170, may not be objected to even by the most ardent vivisector:—

"Experiments are not unfrequently made upon living animals by physicians in the course of their private researches for the purpose of ascertaining the properties of drugs or other facts of importance in medical and anatomical science. Neither the right nor the propriety of making these experiments on reasonable occasions can be disputed, but every degree of heedless and inconsiderate cruelty in prosecuting them will be avoided with scrupulous care by men of feeling and reflection; and whenever they are painful and shocking in the execution, they ought not to be made to develop processes of nature, from the knowledge of which no benefit seems likely to result, to support and elucidate unimportant opinions in comparative anatomy or in any way to gratify idle curiosity. Nor should they be repeated, though originally useful, after they have proved all that can be expected from them, and when the results have been so carefully ascertained that they may be received as data already established."

I would ask is this golden rule carried out? By no means; for we read that the same experiment is renewed over and over again, and the conclusion one vivisector arrives at is contradicted by the other without the slightest regard to the sufferings of the poor, helpless dumb animals subjected to them. Surely, with all your admiration for the vivisectors, you will afford to give a small share to the poor brutes, and say it is by no means right; also I would ask you is it not a fact that in the majority of instances the researches of the most notorious vivisectors have been vain and useless, and what was otherwise could have been ascertained by other means devoid of barbarism and deviltry?

Believe me, Sir, yours faithfully,

JOHN WRIXON, M.R.C.S., &c.

Sarratt House, Sarratt, near Watford,
April 17th, 1882.

*** We have never contended for unlimited and unrestricted vivisection, still less for heartless cruelty in the performance of any experiment upon a lower animal, and our correspondent will see that the safeguards he desires are just those we have always contended for. We assent most heartily to the quotation from Gisborne, but protest against the travesty of our correspondent. Of the operations referred to specifically, some have not been done by British experimenters, and the others, as always now carried out, have been shown to be free from pain.—ED. L.

F.—Parkes' Hygiene, Ganot's Physics, Baldwin-Latham's Sanitary Engineering, and the Public Health Acts. A practical knowledge of chemistry and microscopical analysis of water is required, as well as of the manner in which a sanitary report should be written.

Dr. Saundby.—Yes.

Mr. Gilbert.—Our arrangements are for the present complete.

Mr. Bennett May.—In an early number.

Mr. Wimpfheimer.—There is a complete set of baths at University College Hospital, London.

"UNQUALIFIED PRACTICE."

To the Editor of THE LANCET.

SIR,—I think your correspondent, "Boreal," is wrong in asserting that "all unqualified practitioners can be crushed under the 40th clause of the Medical Act, 1858," as only those who use the titles named in that clause can be punished under it. I know that the clause says "any person who shall wilfully and falsely pretend to be," &c., but if "Boreal" will try to produce evidence proving, or will try to induce any ordinary bench of the "great unpaid" to believe, that one of these unqualified practitioners is pretending to be one of the things punishable under that clause, he will be able to judge how worthless it is as a weapon in the hands of the profession.

Unqualified practitioners who are sharp enough not to use the titles mentioned in the 40th clause can snap their fingers at the Medical Act, and have only to fear the Apothecaries' Act, which again is practically useless, it being cumbersome, and the evidence required difficult to obtain. Neither need they fear the registrar of deaths, as the Deaths Registration Act contains a special clause for their protection, providing for the due registration of the deaths of persons dying under the care of an unqualified practitioner, and the registrar has no option in the case unless he considers it a suspicious one, and that unfair means have been used to procure death.

In my neighbourhood there has lived until lately one of these men. If a death took place amongst his patients, he wrote a certificate on an ordinary piece of paper, stating the cause of death, and after his name adding R.M.S., which initials to the people looked quite as important and mysterious as M.R.C.S., &c., and which probably meant registered medical student. This certificate delivered to the registrar was always followed by the registration of the death, and although the registrar by putting "uncertified" may have refused it in a legal sense, practically he accepted it; so far as the public could see, the certificate obtained the registration, which was all the unqualified man wanted for his success. I drew the attention of the registrar several times to what was going on, but his answer was always the same—that under his instructions he had no alternative but to register unless I could show him something suspicious or wrong about the cases.

There is evidently no necessity (as has been lately reported) for medical men to get themselves into trouble by signing death certificates in cases they have not seen, as one from their unqualified assistant would do just as well. The law, as I have seen it carried out, amounts to this: If John Bull is ill he may send for his groom, gardener, or the butcher from the next street to doctor him, provided he gets somebody; and if he dies the registrar must register the death, because the action of the groom, gardener, or butcher is that of persons recognised by law—they are unqualified practitioners—and the result is provided for by Act of Parliament.

I have heard that the coroner for the borough of Nottingham has decided to inquire into the cause of every uncertified death in his district, and in my opinion this is the only thing likely to check unqualified practice.

I am, Sir, yours respectfully,

April 18th, 1882. SIMEON.

TRIPLETS.

To the Editor of THE LANCET.

SIR,—The following case of triplets may be of interest to some of your readers:—

Mrs. C——, aged thirty-six, residing at Collingwood-street, Chelsea, who had previously had eleven children, all single births, was, on the 8th instant, delivered of three fairly developed living children, a girl and two boys. The labour was quite natural; one rather large placenta, with a double funis, served for the girl and the first boy, whilst the second, who is the feeblest of the three, had a separate placenta. The woman, who is in indigent circumstances, received Her Majesty's bounty of £3.

I am, Sir, yours truly,

Smith-street, Chelsea, April 19th, 1882. ROBT. D. SHIELD.

PRINCE LEOPOLD'S MEDICAL ATTENDANT.

Inquirer.—Mr. Arnold Royle (not Boyd, as the name has often appeared in the newspapers) has been with His Royal Highness the Duke of Albany since 1875, and the Duke has never since then had any other doctor except occasionally Dr. Marshall or Dr. Reid. The former was Her Majesty's domestic medical attendant, and the latter occupies that post at the present time.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Marshall, London; Professor Struthers, Aberdeen; Professor Charteris, Glasgow; Sir E. Lechmere, London; Dr. Stephen Mackenzie, London; Mr. Timins, West Malling; Dr. Heywood Smith, London; Mr. Peyton, London; Dr. Douglas Lithgow, London; Dr. Macaulay, Newcastle; Dr. R. Blake; Mr. A. T. Norton; Mr. Milman, London; Mr. Morris, London; Mr. Dickinson, Wandsworth; Mr. E. Bracher, Wincanton; Mr. Tallack, London; Mr. Senior, London; Mr. Bruce Joy, London; Mr. Laffan, Cashel; Dr. Saundby, Birmingham; Mr. Oswald, London; Mr. Merriman, London; Mr. Kelly, Limerick; Dr. Swann, Batley; Mr. Southam, Manchester; Dr. de Lacerda, Rio de Janeiro; Mr. Ikin; Mr. Bennett May, Birmingham; Mr. Whitefoord, London; Mr. Wyatt, Stamford-hill; Mr. Wimpfheimer, Liverpool; Mr. Gilbert; Mr. Noble Smith; Mr. Phillips, London; Mr. Buxton; Mr. Jenkins, Swansea; Mr. J. Startin; Dr. Hunter Mackenzie, Edinburgh; Mr. T. Wood, London; Dr. Wharry, London; Dr. Spender, Bath; Mr. W. Thomson, South Yarra; Brigade-Surgeon Oughton, London; Mr. J. S. Wood, Woodville; Dr. Vincent Richards; Dr. Dawar; Mr. Routh, London; Mr. Hudson, Sheffield; Mr. E. D. Palmer, Cork; Mr. Shirley Murphy, London; Mr. Chaudrasen, Gauripar; Miss Welshman, Ballymenan; Mr. C. R. Hodgson, London; Dr. Gilroy, Waterbeck; Mr. Vesey, Chelmsford; Messrs. Maguire and Son, Dublin; Messrs. King and Co., Cornhill; Surgeon Martin, Cork; Mr. Howland, London; Dr. Ashby, Manchester; Mr. Austin, London; Mr. Gillon; Mr. R. Harrison, Liverpool; Mr. Kennedy, Stratford; Messrs. Beal and Co., London; Mr. Pigott, Wadsley; Mr. Wooddeson, Portsmouth; Mr. Buckle, Brighton; Dr. Abbots, Westgate-on-Sea; Mr. Essex, Pontypool; Mr. F. Mason, London; Home; Caractacus; Hypatia; Naturalist; W. K.; One who won't Bite; C. W. A.; D. D. S.; Y.; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Veley, Chelmsford; Mr. Playfair, Bromley; Dr. Ritchie, Otley; Mr. Lane, Stratford-on-Avon; Dr. Thomson, Camberwell; Messrs. Wright and Co., Birmingham; Mr. Jeffries, Chesterfield; Mr. Popjoy, Accrington; Mr. Cooper, Blackheath; Dr. Buck, Ryde; Mr. Thomas, Redford; Dr. Bramwell, Tynemouth; Mr. Nickoll, Adelaide, South Australia; Mr. Dayson, Ebbw Vale; Mr. Teal, Halifax; Dr. C. Black, Glasgow; Mr. Ellis, Bangor; Mr. Jameson, Kensington; Mr. Baily, Edinburgh; Mr. Jennings, Deptford; Mr. Phillips; Dr. Andrews, Shrewsbury; Messrs. Keith and Co., Edinburgh; Dr. Thomson, Menai-bridge; Mr. Rutter, Hammersmith; Mr. Trippier; Mr. Neame, Birchington-on-Sea; Messrs. Christy and Co., London; Mr. Berry, Upwell; Mr. Clark, Dorking; A. B., Bradford; J. M. G., Northampton; Surgeon, Hackney; Æsculap; Bismuth, St. George's; Attendant; Medicus, Attleborough; Thoma, London Hospital; M. S.; Medicus, Glasgow; M.D., Derby; Surgeon, Euston-road; Principal, Seaford; A. Y. X.; D. D., Hackney; S. S. B.; Medicus, Liverpool; Medicus, Steeple Aston; Alter Ego, Grinley-on-the-Hill; Omega; Medicus, Camden-town; &c., &c.

Church Standard, Word and Work, Sussex Daily Post, Leigh Journal, Church of England Temperance Chronicle, Hove Courier, Aberdare Times, Salford Weekly News, Metropolitan, North-Western Gazette, Central Glamorgan Gazette, Sheffield and Rotherham Independent, Planters Journal, &c., have been received.

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